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ABSTRACT

In this set of three booklets on simplifying data, primary grade students learn how to round off data and to find the median and average from sets of data. The major emphasis in all Unified Sciences and Mathematics for Elementary Schools (USMES) units is on open-ended, long-range investigations of real problems. In most instances students learn through observing results of their own and their classmates' experiments. However, students may recognize the need for certain facts and/or skills during their investigations. Although some children prefer to work things out for themselves, others may ask for help. USMES "How To Sets" are designed to provide such assistance. Each booklet in a set contains several examples of children using a skill being taught, each example emphasizing a different aspect of the skill or a potential pitfall. Cover pages summarize what is being taught by illustrating the general problem and solution. There is no sequence to the sets (or booklets within sets) and they should not be used out of the context of childrens' open investigation of a practical problem. (Author/JN)

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HOW TO SET SIMPLIFYING DATA

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IN THIS SET STUDENTS WILL FIND OUT HOW TO ...

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ROUND OFF DATA	FIND THE MEDIAN	FIND THE AVERAGE

SE 093 095

WHAT IS USMES?

USMES challenges students to solve real problems within their school and community. Children tackle problems like a busy or unsafe intersection near their school, classroom furniture that doesn't fit them, or playgrounds that are crowded or uninteresting. These problems have immediate and practical impact on students. They have no established, correct solutions--students take or recommend action based upon whatever data they collect and analyze. Furthermore, the children themselves, not the teacher, direct the problem-solving process.

Solving real problems is interdisciplinary: skills, processes, and concepts from science, mathematics, social science, and language arts all play a part. For example, students conduct opinion surveys, build measuring devices, write letters, and make and use graphs. They also make decisions, work productively in small groups, and develop and clarify values.

The USMES curriculum is organized into twenty-six problems, or units, that have been developed in the classroom by teachers and students in a wide variety of schools. Most units can be used in grades K-8 although the level at which students approach a problem and develop a solution will vary according to age, ability, and interest.

RESOURCES FOR AN USMES PROGRAM

In addition to the USMES "How To" Series, there are--

The USMES Guide: This book describes the USMES project, real problem solving, classroom strategies, the Design Lab, the units, and the support materials as well as ways that USMES helps students learn basic skills.

Teacher Resource Books (one per unit): Each of these guides to using USMES units describes a broad problem, explains how students might narrow that problem to meet their particular needs, recommends classroom strategies, and presents logs from teachers whose classes have worked on the unit.

Design Lab Manual: This guide helps teachers and administrators set up, run, and use a Design Lab--a place with tools and materials where students can build things they need for their work on USMES units. A Design Lab may be a corner of a classroom, a portable cart, or a separate room.

Background Papers: These papers, correlated with the "How To" Series, provide teachers with information and hints that do not appear in the student materials.

Curriculum Correlation Guide: By correlating the twenty-six USMES units with other curriculum materials, this book helps teachers integrate USMES with other school activities and lessons.

The "How To" Series is a resource developed by the USMES project. Earle L. Lodion, Project Director, Betty M. Beck, Associate Director for Development, Thomas L. Brown, Associate Director for Utilization Studies, Quinton E. Baker, Associate Director for Administration.

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Complete USMES Library ISBN: 0-89292-033-5
Beginning "How To" Series ISBN: 0-89292-029-7

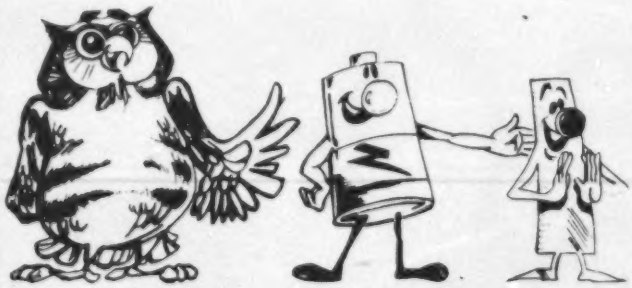
THE USMES BEGINNING "HOW TO" SERIES

USMES and Skills

USMES students often see a need to learn new skills to help them get a problem-solving job done. Children seeking to improve a street crossing may want to learn how to use a stopwatch or how to make a trundle wheel. Children comparing different brands of paper towels may want to learn how to design an experiment and how to make a bar graph. The list can go on and on, but the pattern is clear; solving a real problem requires skills.

Purpose of 'How To' Series

Written resources that help children learn skills like designing an opinion survey and choosing the appropriate measuring tool are not readily available for elementary school students. However, the USMES "How To" Series fills this gap. Its cartoon-style format helps younger children and those with reading difficulties acquire the skills and knowledge they need to do things like redesign their classroom, find the best buy in potato chips, or run a school store.



How to Use the 'How To' Series

Wait for a need. When a student asks for help, refer him or her to the appropriate booklet. Having a child read a booklet before there is a need to do so will not only result in less effective learning but will defeat the USMES purpose of allowing children to decide what needs to be done.

When necessary, use the "How To" Series as a teaching aid. Most of the time children will be able to go through a booklet by themselves and learn the skills they need to learn. However, some material in some sets is difficult and somewhat abstract. Such sections are usually towards the ends of booklets and often labeled "extra." When the booklet by itself is not doing the job, feel free to step in and help the student go through it.

Knowing how the content of the booklets are organized may help in using the series effectively.

- Each cover page summarizes what is in the booklet by illustrating the general problem and solution.
- Each booklet contains several examples of children using the skill being taught. Each example emphasizes a different aspect of the skill or a potential pitfall.
- Where a skill covered in one booklet is used in another, there is a reference in the form: See "How To...."

OTHER USMES 'HOW TO' SERIES

Intermediate "How To" Series: This magazine-style series covers in more detail essentially the same material as the cartoon-style series with a few booklets on additional skills. This series gives students a chance to read something they have a need to read.

Design Lab "How To" Series: These illustrated cards help children learn how to use tools safely and effectively.

"How To" Cards: These cards are printed on colored card stock rather than paper as the other series are. They contain fewer words than the *Intermediate "How To" Series* and utilize the American system of units (ft.-lb.-sec.) rather than the metric system.

BEGINNING "HOW TO" SERIES

BIOLOGY

How To
- Make a Home for Your Animal
- Make a Home for Your Rodent

COLLECTING DATA

How To
- Record Data
- Do an Experiment
- Make an Opinion Survey
- Choose a Sample

ELECTRICITY

How To
- Make Simple Circuits
- Make a Circuit Stay Together
- Add Things to a Circuit
- Make and Use Switches
- Fix a Circuit

GRAPHING

How To
- Choose Which Graph to Make
- Make a Bar Graph
- Make a Bar Graph Histogram
- Make a Conversion Graph
- Make a Line Chart
- Make a Line Graph
- Make a Scatter Graph
- Make a Slope Diagram

MEASURING

How To
- Use a Stopwatch
- Choose the Right Tool to Measure Distance
- Use a Trundle Wheel
- Make a Scale Drawing
- Find the Speed of Things

SIMPLIFYING DATA

How To
- Round Off Data
- Find the Median
- Find the Average

Conceived and Written by:
Sally Agro, Betty M. Beck, L. Ray Brady Jr., Edward Manfre

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John M. Evans

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John W. Saalfield

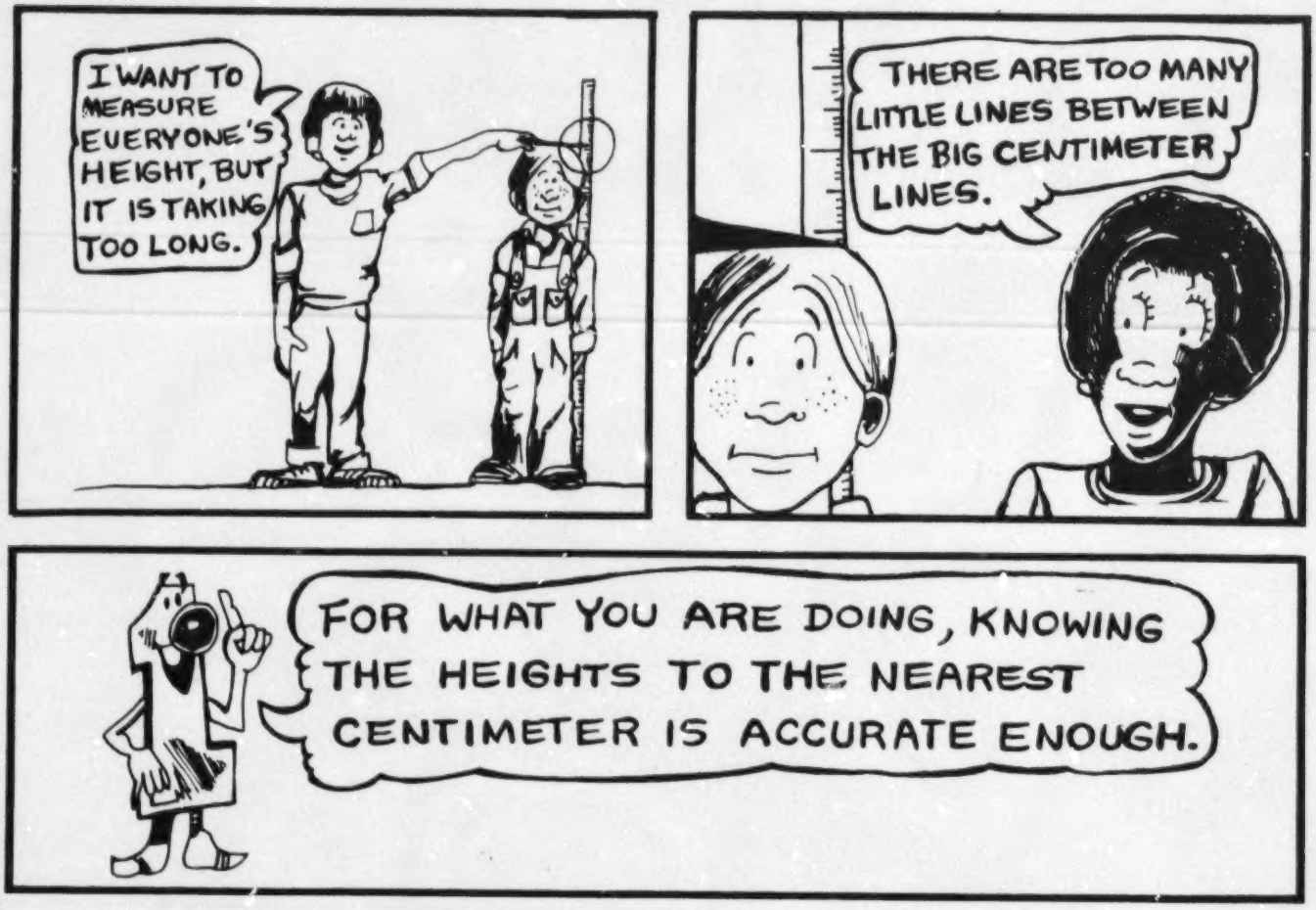
Production Assistance
Paula Lakeberg

edc

HOW TO

ROUND OFF DATA

USMES
UNIFIED SCIENCES AND MATHEMATICS FOR ELEMENTARY SCHOOLS



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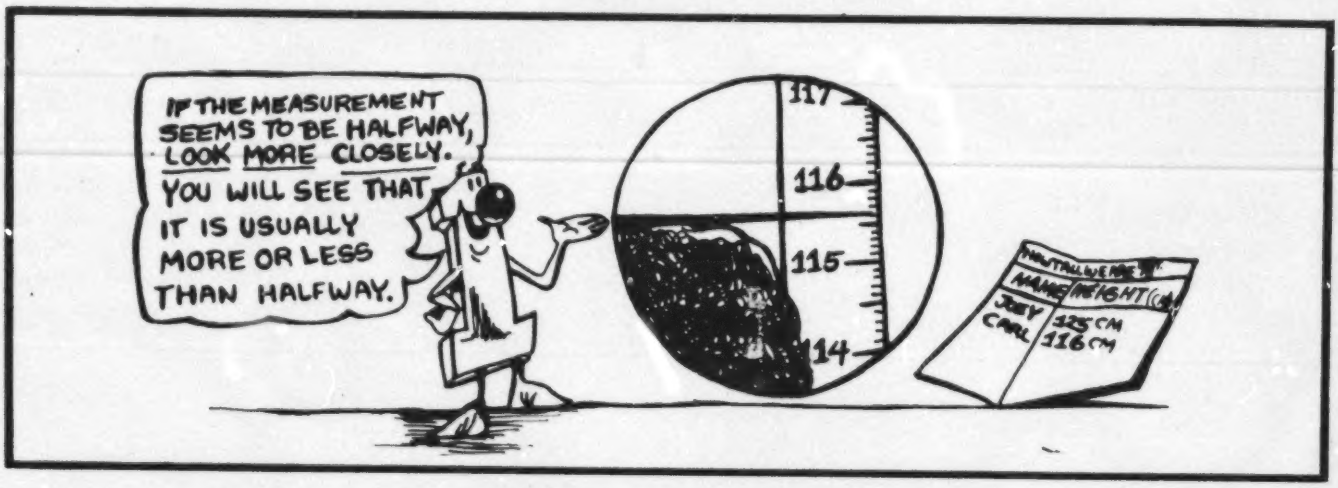
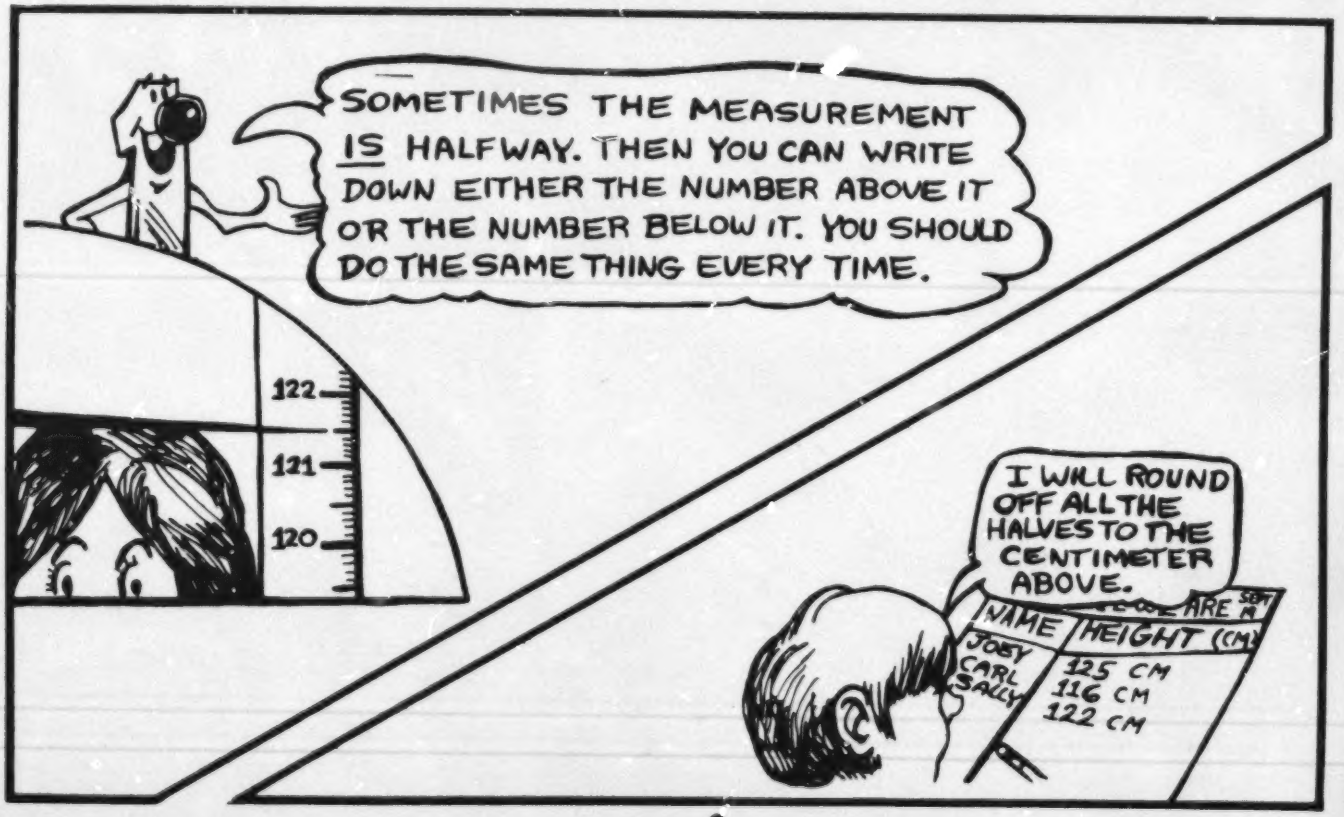
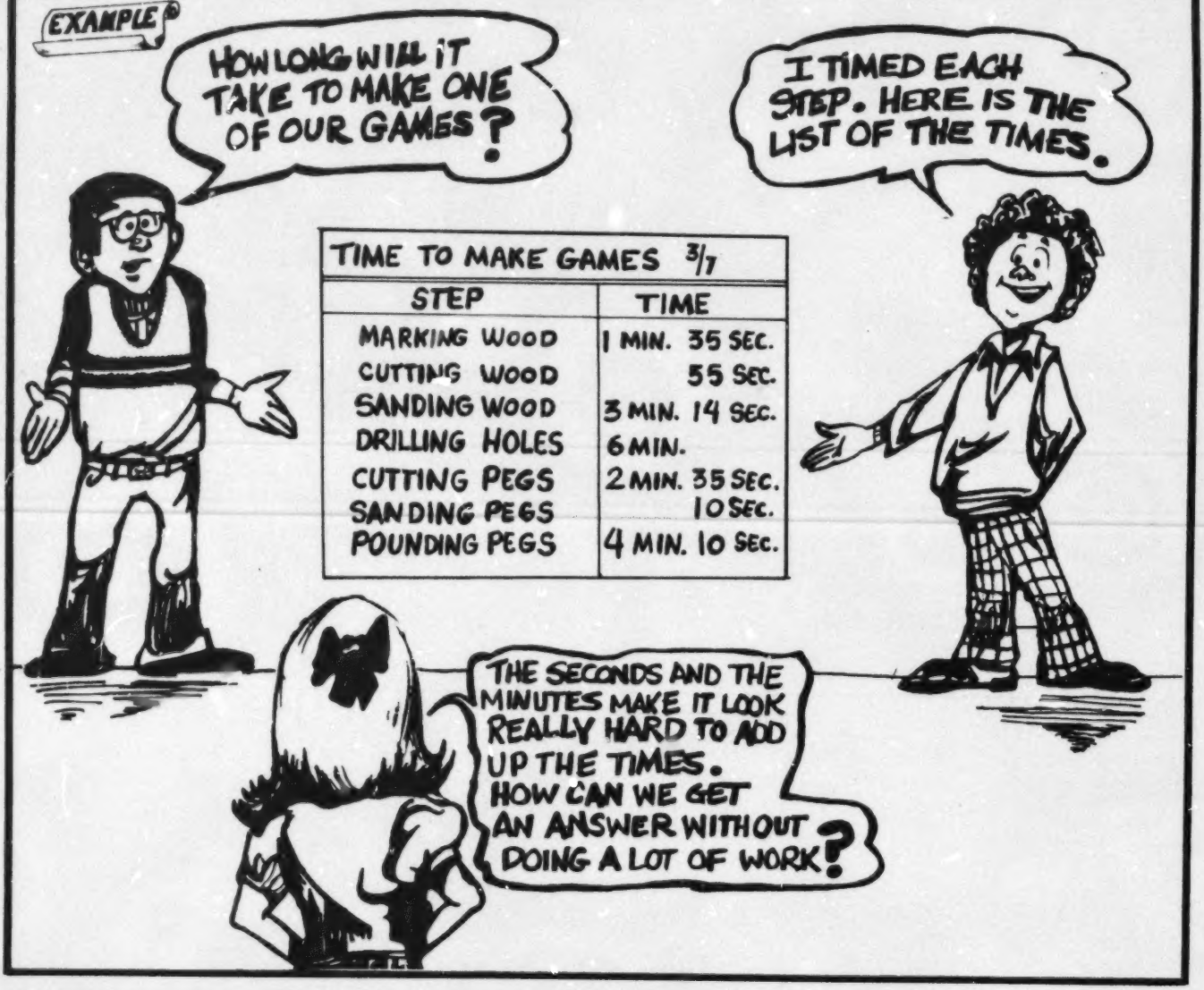
WHAT IF THE MEASUREMENT IS HALFWAY BETWEEN TWO CENTIMETER LINES?


IF THE MEASUREMENT SEEMS TO BE HALFWAY, LOOK MORE CLOSELY. YOU WILL SEE THAT IT IS USUALLY MORE OR LESS THAN HALFWAY.
117
116
115
114
NAME
HEIGHT (CM)
JOEY
CARL
125 CM
116 CM

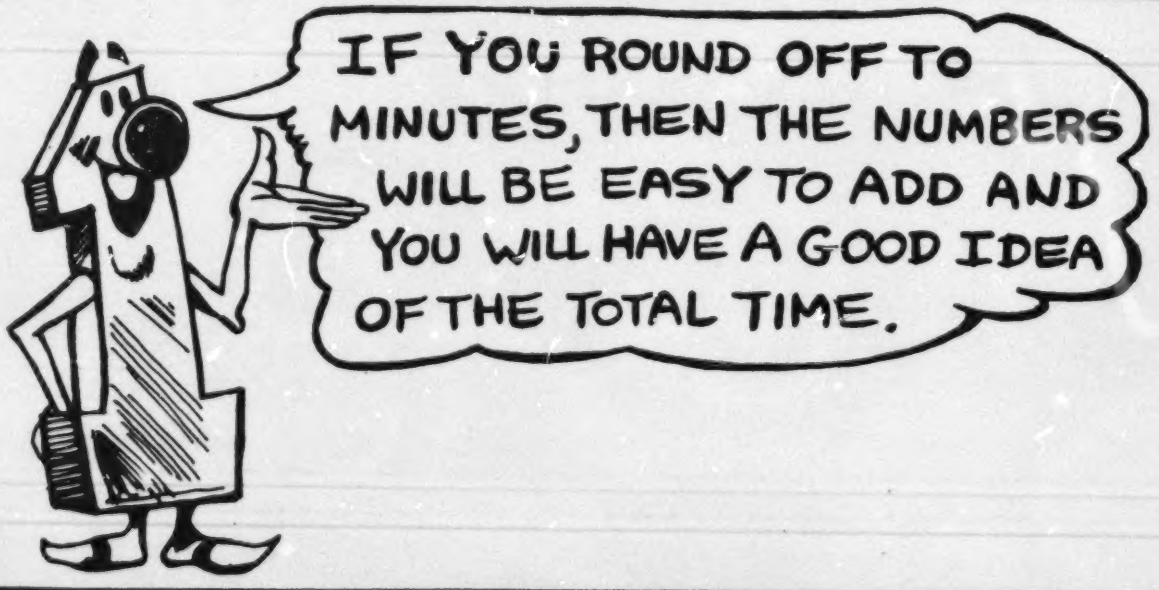

SOMETIMES THE MEASUREMENT IS HALFWAY. THEN YOU CAN WRITE DOWN EITHER THE NUMBER ABOVE IT OR THE NUMBER BELOW IT. YOU SHOULD DO THE SAME THING EVERY TIME.
122
121
120
I WILL ROUND OFF ALL THE HALVES TO THE CENTIMETER ABOVE.
NAME
HEIGHT (CM)
JOEY
CARL
SALLY
125 CM
116 CM
122 CM

EXAMPLE

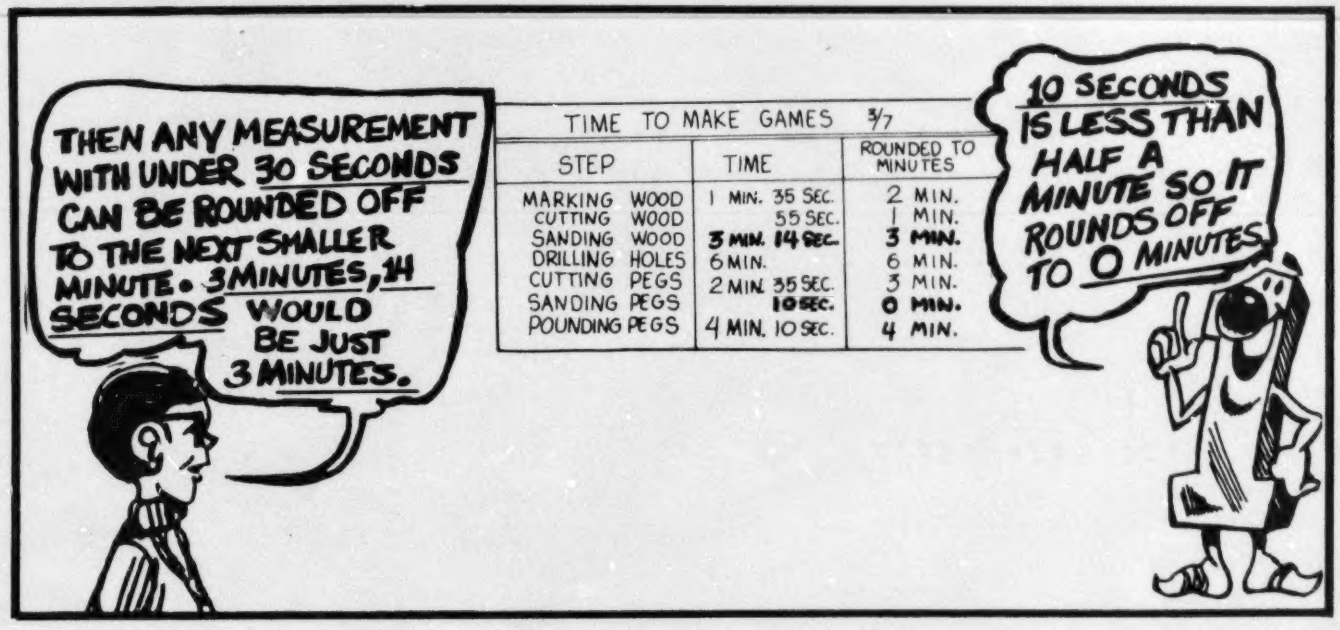

HOW LONG WILL IT TAKE TO MAKE ONE OF OUR GAMES?
I TIMED EACH STEP. HERE IS THE LIST OF THE TIMES.
THE SECONDS AND THE MINUTES MAKE IT LOOK REALLY HARD TO ADD UP THE TIMES. HOW CAN WE GET AN ANSWER WITHOUT DOING A LOT OF WORK?

TIME TO MAKE GAMES 3/7

STEP	TIME
MARKING WOOD	1 MIN. 35 SEC.
CUTTING WOOD	55 SEC.
SANDING WOOD	3 MIN. 14 SEC.
DRILLING HOLES	6 MIN.
CUTTING PEGS	2 MIN. 35 SEC.
SANDING PEGS	10 SEC.
POUNDING PEGS	4 MIN. 10 SEC.

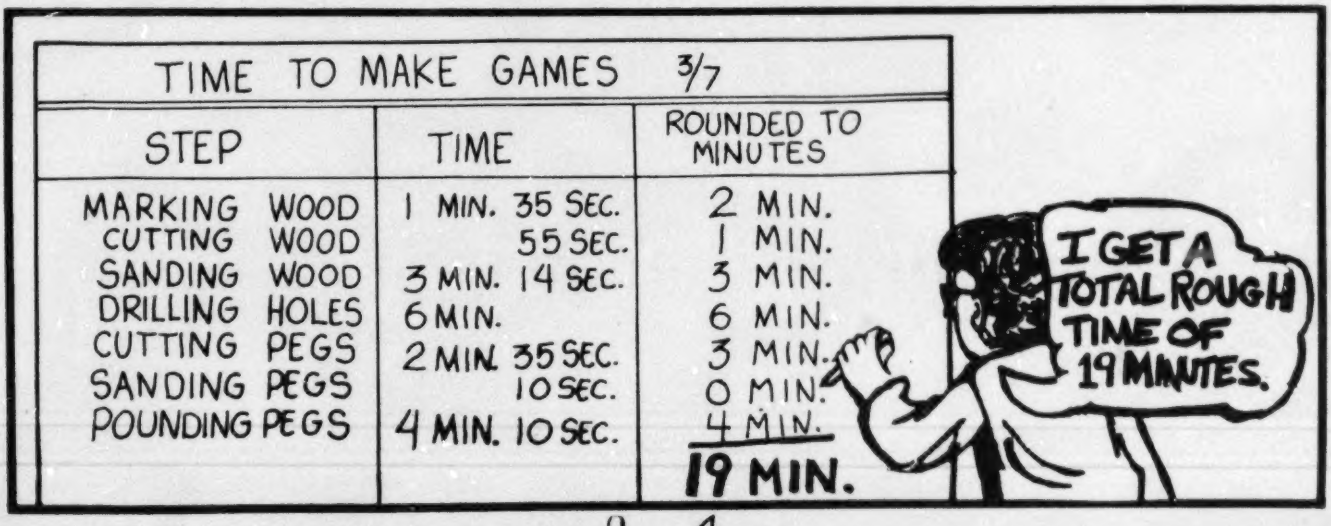


HOW DO I ROUND OFF SECONDS?
THERE ARE 60 SECONDS IN ONE MINUTE SO 30 SECONDS IS THE HALFWAY MARK. ANY MEASUREMENT OVER 30 SECONDS CAN BE ROUNDED OFF TO THE NEXT BIGGER MINUTE.
2 min.


THEN ANY MEASUREMENT WITH UNDER 30 SECONDS CAN BE ROUNDED OFF TO THE NEXT SMALLER MINUTE. 3 MINUTES, 14 SECONDS WOULD BE JUST 3 MINUTES.
10 SECONDS IS LESS THAN HALF A MINUTE SO IT ROUNDS OFF TO 0 MINUTES

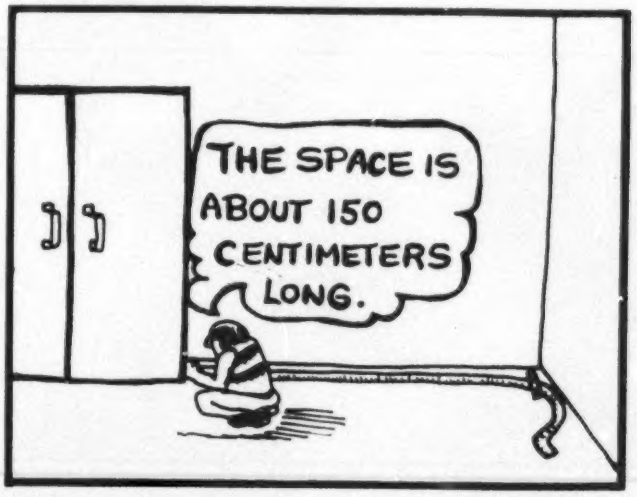
TIME TO MAKE GAMES 3/7

STEP	TIME	ROUNDED TO MINUTES
MARKING WOOD	1 MIN. 35 SEC.	2 MIN.
CUTTING WOOD	55 SEC.	1 MIN.
SANDING WOOD	3 MIN. 14 SEC.	3 MIN.
DRILLING HOLES	6 MIN.	6 MIN.
CUTTING PEGS	2 MIN. 35 SEC.	3 MIN.
SANDING PEGS	10 SEC.	0 MIN.
POUNDING PEGS	4 MIN. 10 SEC.	4 MIN.

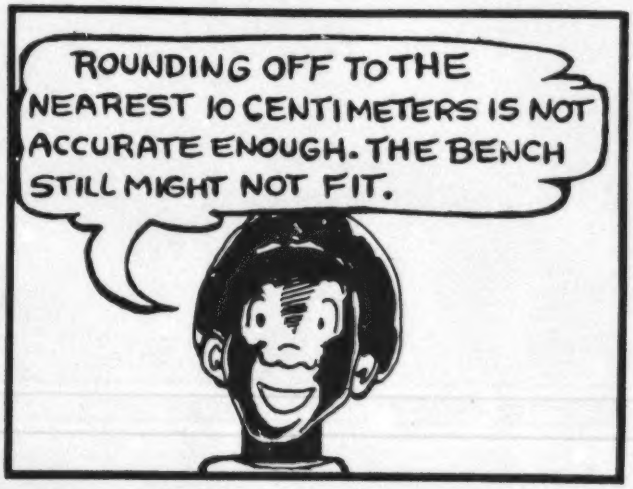

TIME TO MAKE GAMES 3/7
STEP
TIME
ROUNDED TO MINUTES
MARKING WOOD 1 MIN. 35 SEC. 2 MIN.
CUTTING WOOD 55 SEC. 1 MIN.
SANDING WOOD 3 MIN. 14 SEC. 3 MIN.
DRILLING HOLES 6 MIN. 6 MIN.
CUTTING PEGS 2 MIN. 35 SEC. 3 MIN.
SANDING PEGS 10 SEC. 0 MIN.
POUNDING PEGS 4 MIN. 10 SEC. 4 MIN.
19 MIN.
I GET A TOTAL ROUGH TIME OF 19 MINUTES.

EXAMPLE
THE CLASS WANTS TO PUT THE WORKBENCH BY THE TOOL CABINET.
WILL THE BENCH FIT?
TOOLS

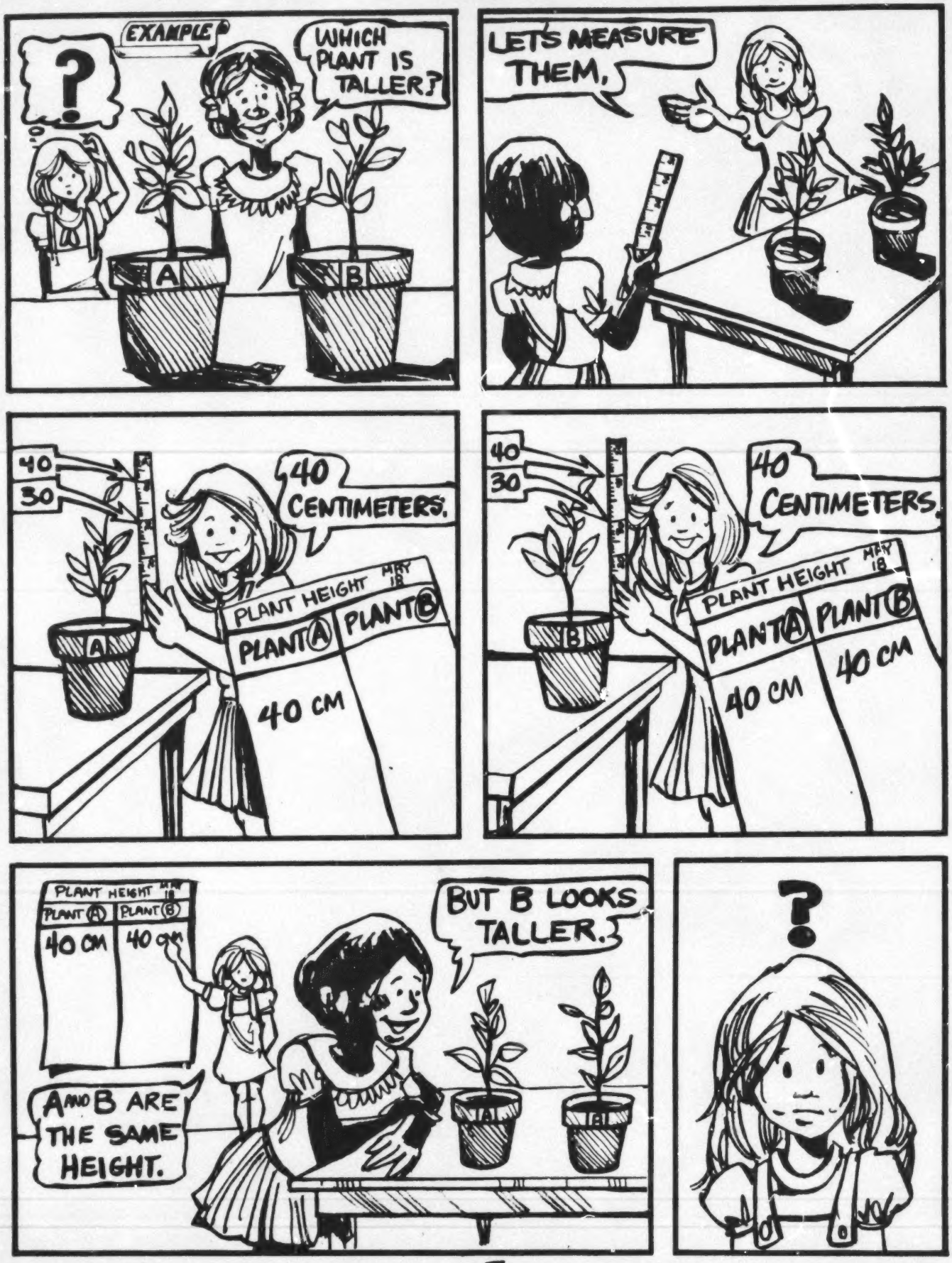
THE BENCH IS ABOUT 150 CENTIMETERS LONG.


THE SPACE IS ABOUT 150 CENTIMETERS LONG.

HOW DID YOU ROUND OFF?
TO THE NEAREST 10 CENTIMETERS.


ROUNDING OFF TO THE NEAREST 10 CENTIMETERS IS NOT ACCURATE ENOUGH. THE BENCH STILL MIGHT NOT FIT.

I'M NOT GOING TO MOVE THE BENCH UNTIL I'M SURE IT WILL FIT!!
YOU DON'T HAVE TO MOVE IT. JUST MEASURE AGAIN TO THE NEAREST CENTIMETER.
THE BENCH IS 152 CENTIMETERS LONG.
THE SPACE IS ONLY 146 CENTIMETERS.
IT WON'T FIT.
I'M GLAD WE DIDN'T MOVE IT.


EXAMPLE
?
WHICH PLANT IS TALLER?
A
B
LET'S MEASURE THEM,
40
30
40 CENTIMETERS.
PLANT HEIGHT MAY 18
PLANT A
PLANT B
40 CM
40 CM
BUT B LOOKS TALLER.
A AND B ARE THE SAME HEIGHT.
?

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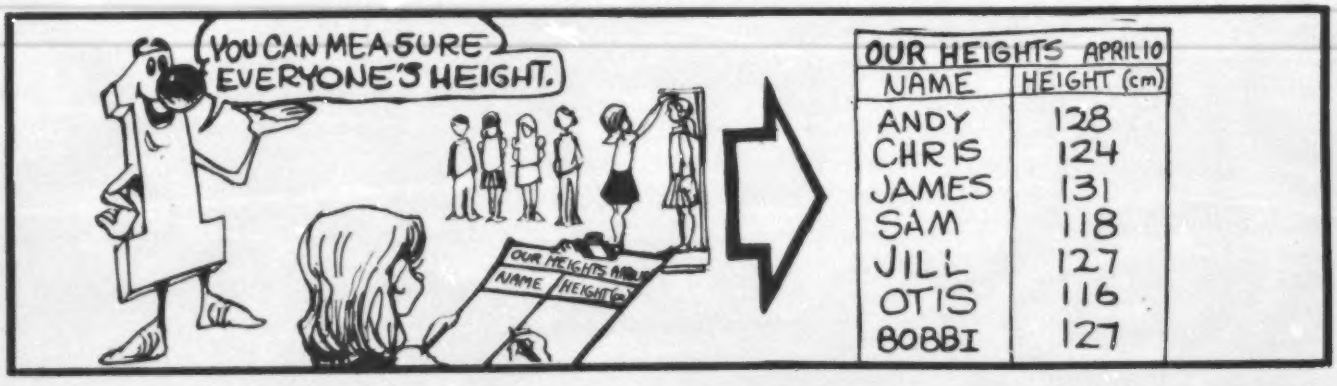
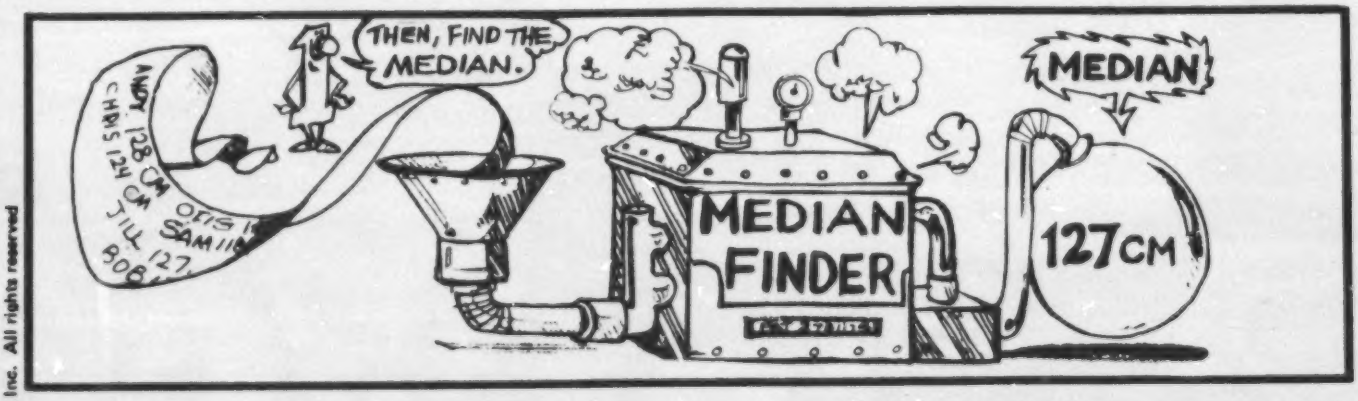
HOW TO

FIND THE MEDIAN





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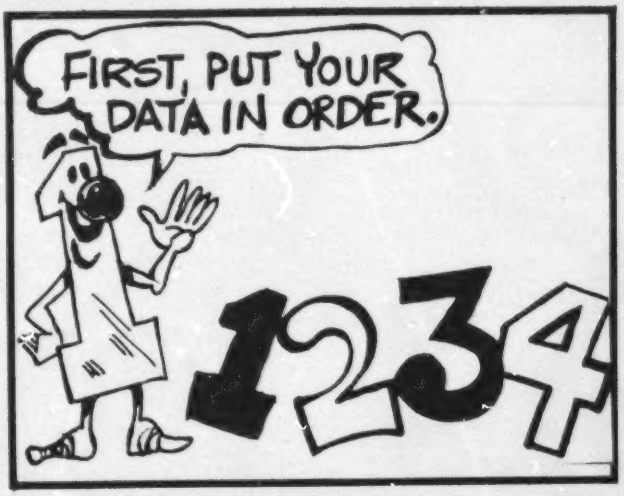
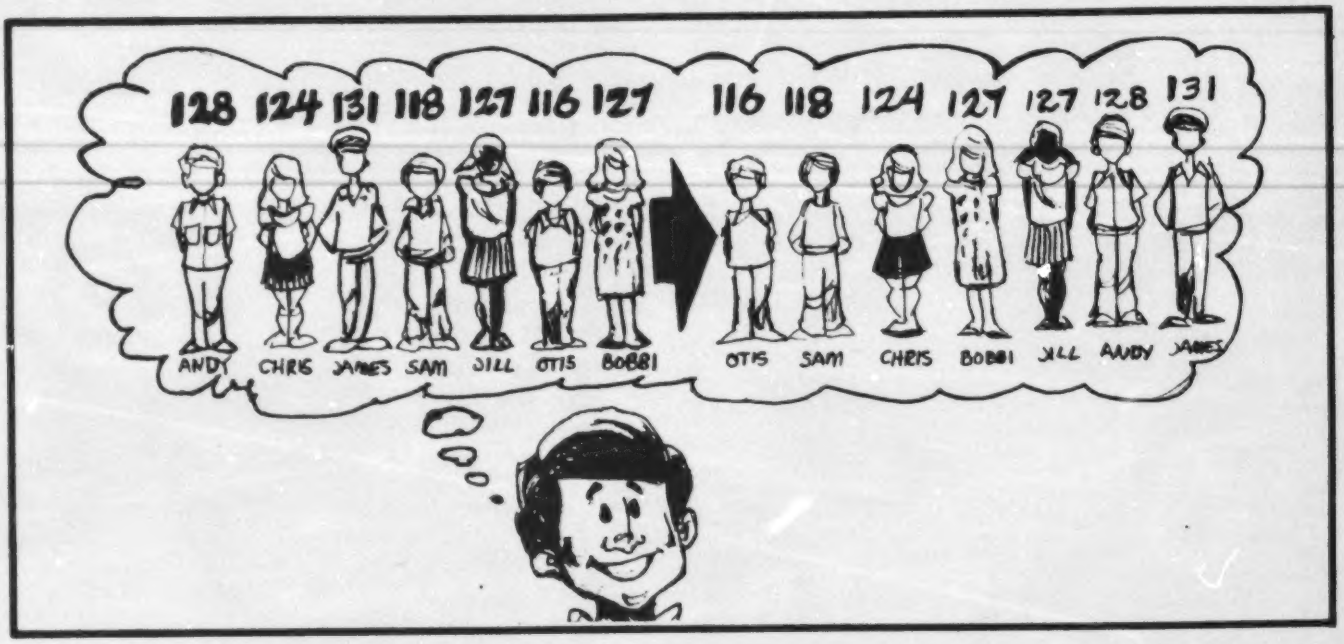
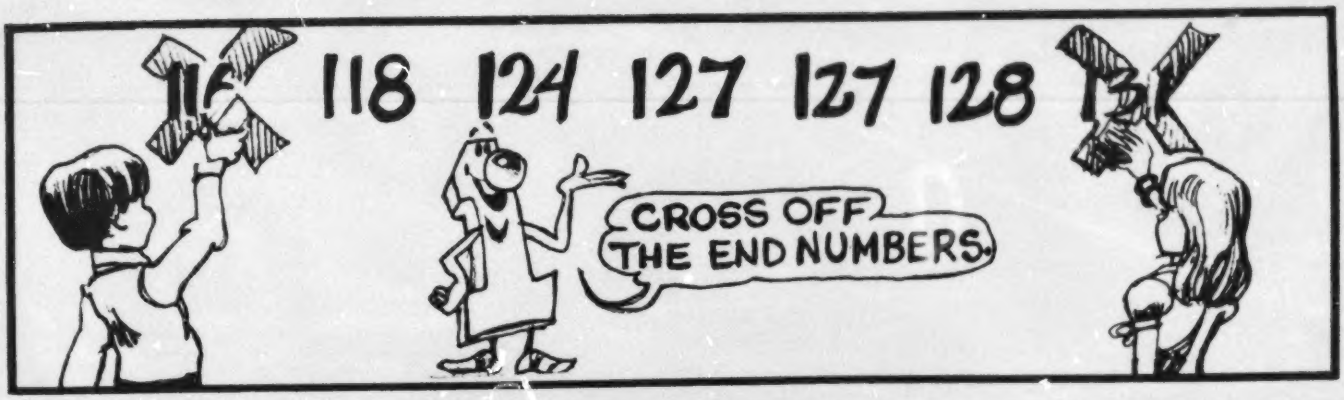
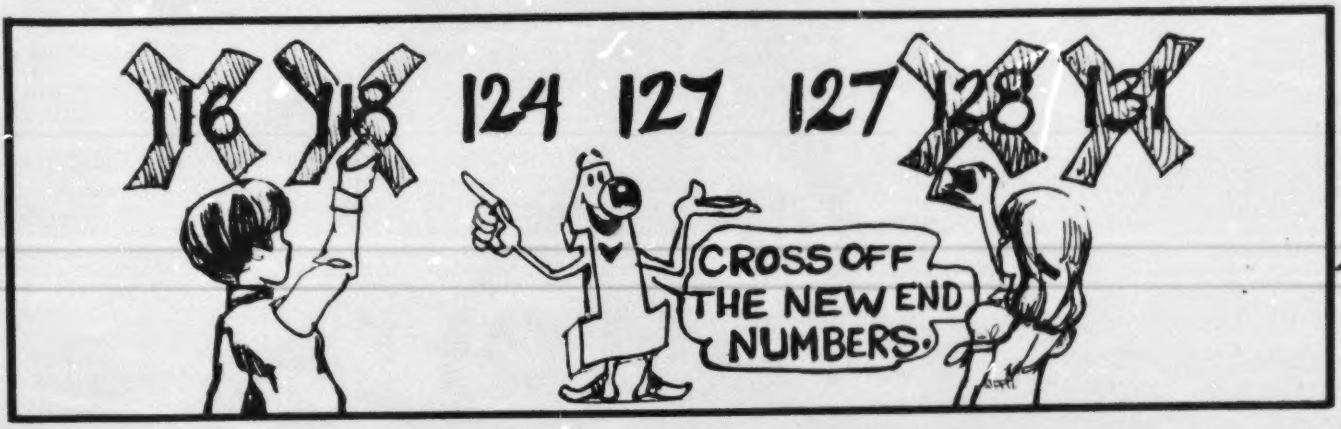
HOW DO YOU FIND THE MEDIAN?
OTIS 116
ANDY 128
CHRIS 124
JAN
SAM


FIRST, PUT YOUR DATA IN ORDER.
1234

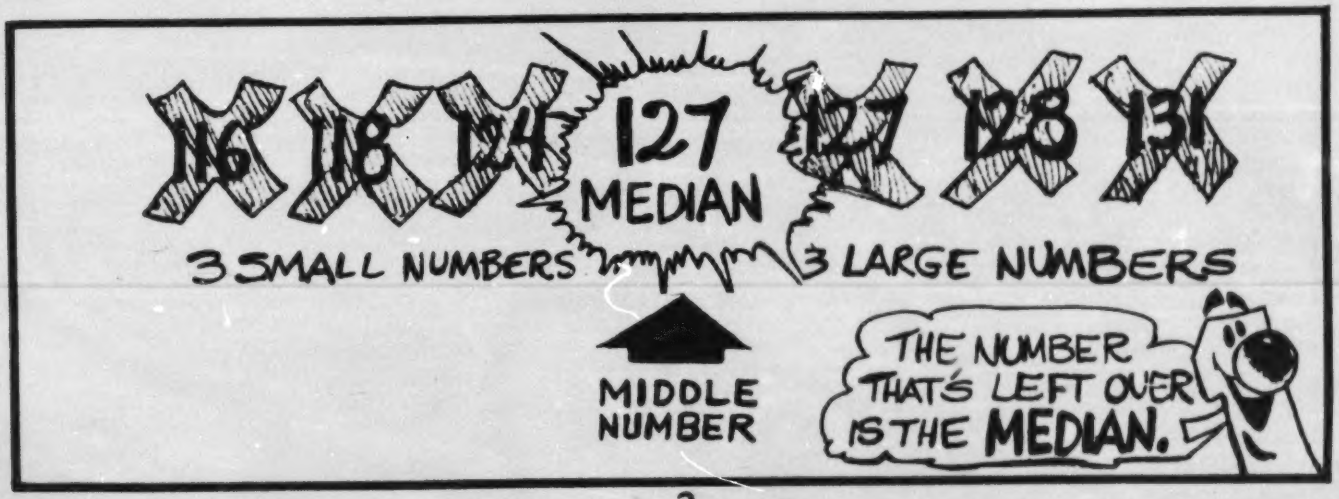

128 124 131 118 127 116 127
ANDY
CHRIS
JAMES
SAM
JILL
OTIS
BOBBI
116 118 124 127 127 128 131
OTIS
SAM
CHRIS
BOBBI
JILL
ANDY
JAMES

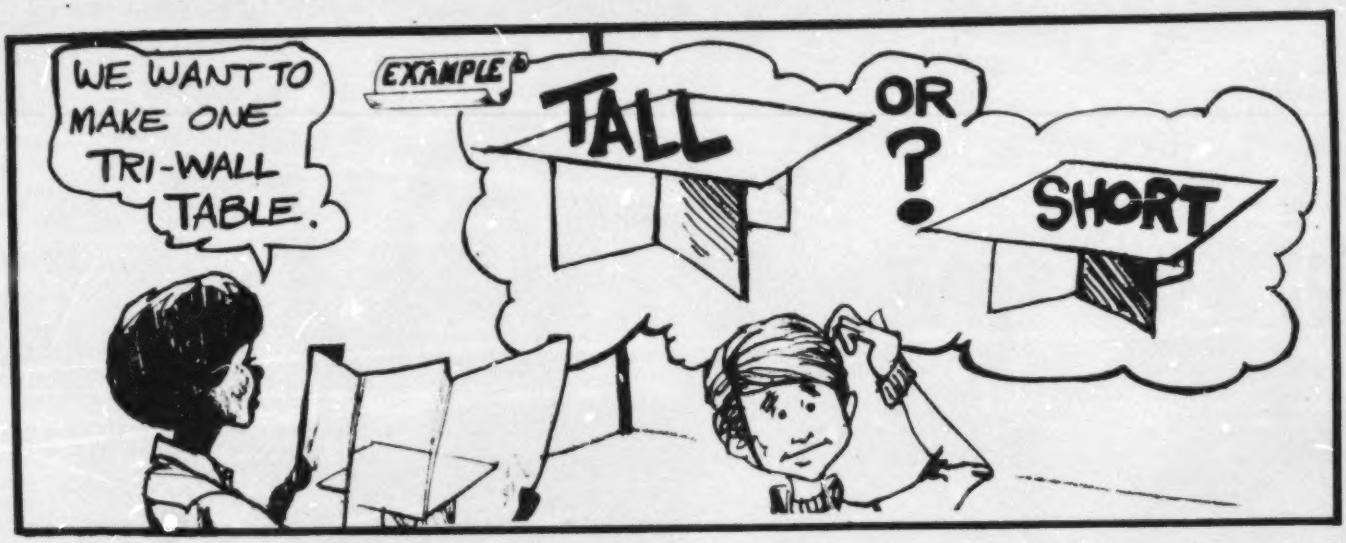
NOW, TAKE YOUR NUMBERS AND...
116 118 124 127 127 128 131


116
118 124 127 127 128 131
CROSS OFF THE END NUMBERS.


116 118 124 127 127 128 131
CROSS OFF THE NEW END NUMBERS.

116 118 124 127 127 128 131
DO IT AGAIN.


116 118 124 127 127 128 131
127
MEDIAN
3 SMALL NUMBERS
3 LARGE NUMBERS
MIDDLE NUMBER
THE NUMBER THAT'S LEFT OVER IS THE MEDIAN.



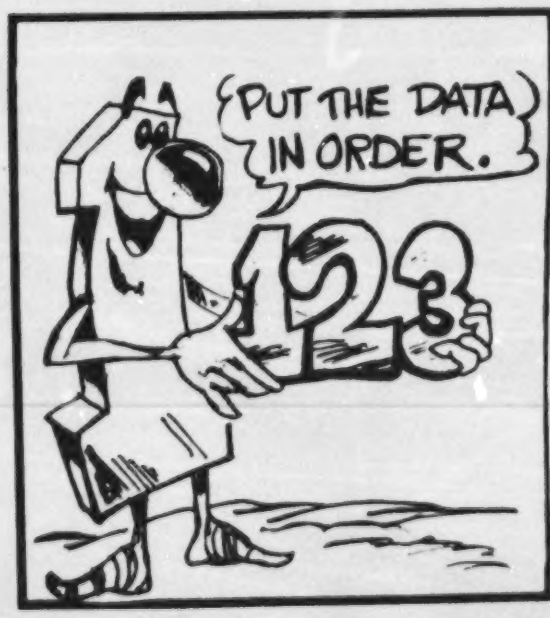


TABLE SIZES NOV.3

NAME	HOW HIGH (cm)
LEROY	73
PETE	67
ANITA	51
JOAN	59
BERT	78
TERRY	70
MIKE	55
SUE	68

TABLE SIZES NOV.3

NAME	HOW HIGH (cm)
ANITA	51
MIKE	55
JOAN	59
PETE	67
SUE	68
TERRY	70
LEROY	73
BERT	78

SMALLEST

LARGEST

TABLE SIZES NOV. 3

NAME	HOW HIGH (CM)
ANITA	~~55~~
MIKE	55
JOAN	59
PETE	67
SUE	68
TERRY	70
LEROY	73
BERT	~~73~~

TABLE SIZES NOV. 3

NAME	HOW HIGH (CM)
ANITA	~~55~~
MIKE	~~55~~
JOAN	59
PETE	67
SUE	68
TERRY	70
LEROY	~~73~~
BERT	~~73~~

TABLE SIZES NOV. 3

NAME	HOW HIGH (CM)
ANITA	~~55~~
MIKE	~~55~~
JOAN	~~59~~
PETE	67
SUE	68
TERRY	~~70~~
LEROY	~~73~~
BERT	~~73~~

THERE ARE TWO MIDDLE NUMBERS!

TABLE SIZES NOV. 3

NAME	HOW HIGH (CM)
ANITA	~~55~~
MIKE	~~55~~
JOAN	~~59~~
PETE	67
SUE	68
TERRY	~~70~~
LEROY	~~73~~
BERT	~~73~~

WHICH ONE IS THE MEDIAN?

67

68

THE MEDIAN IS HALFWAY BETWEEN.

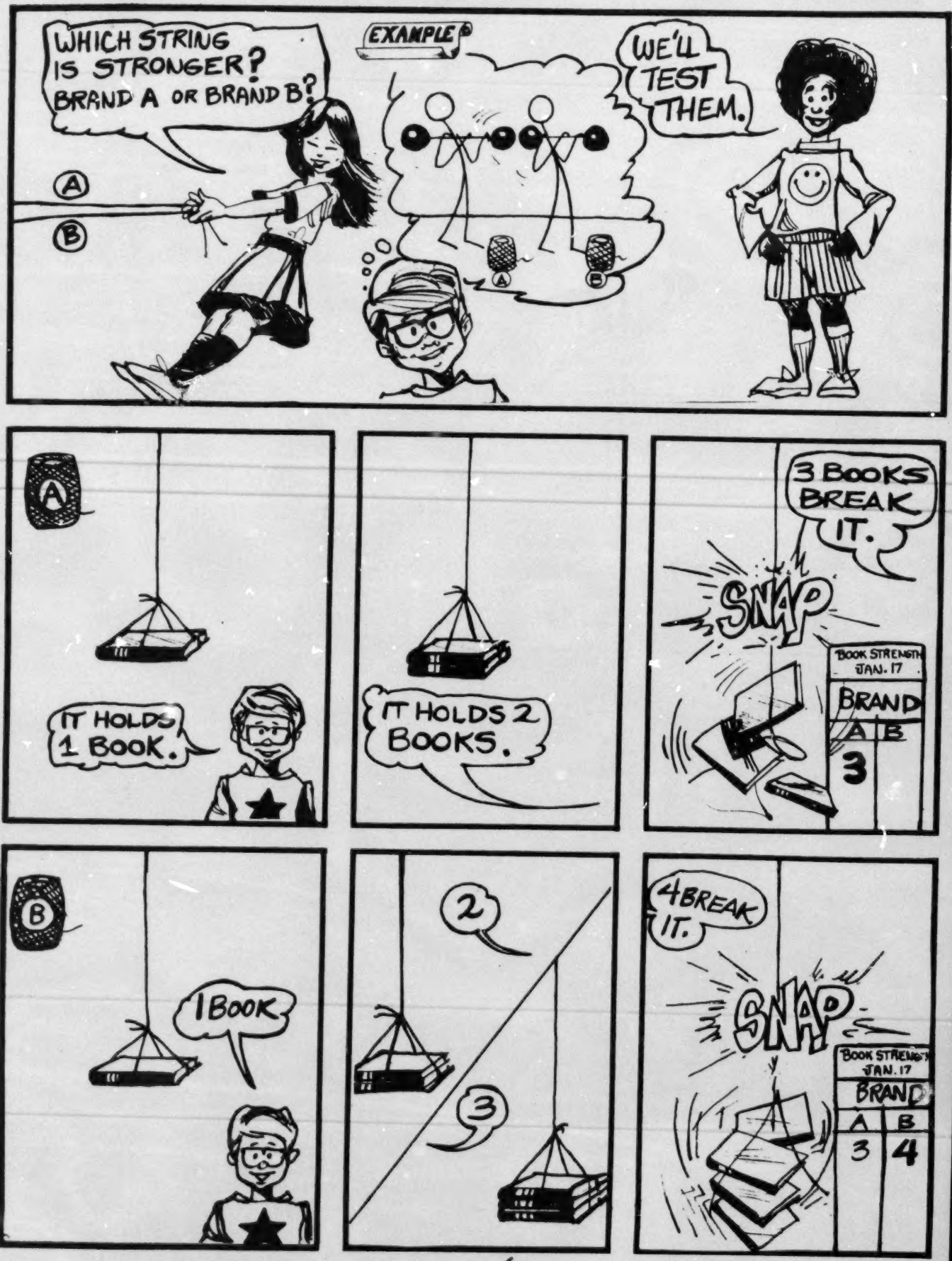
67

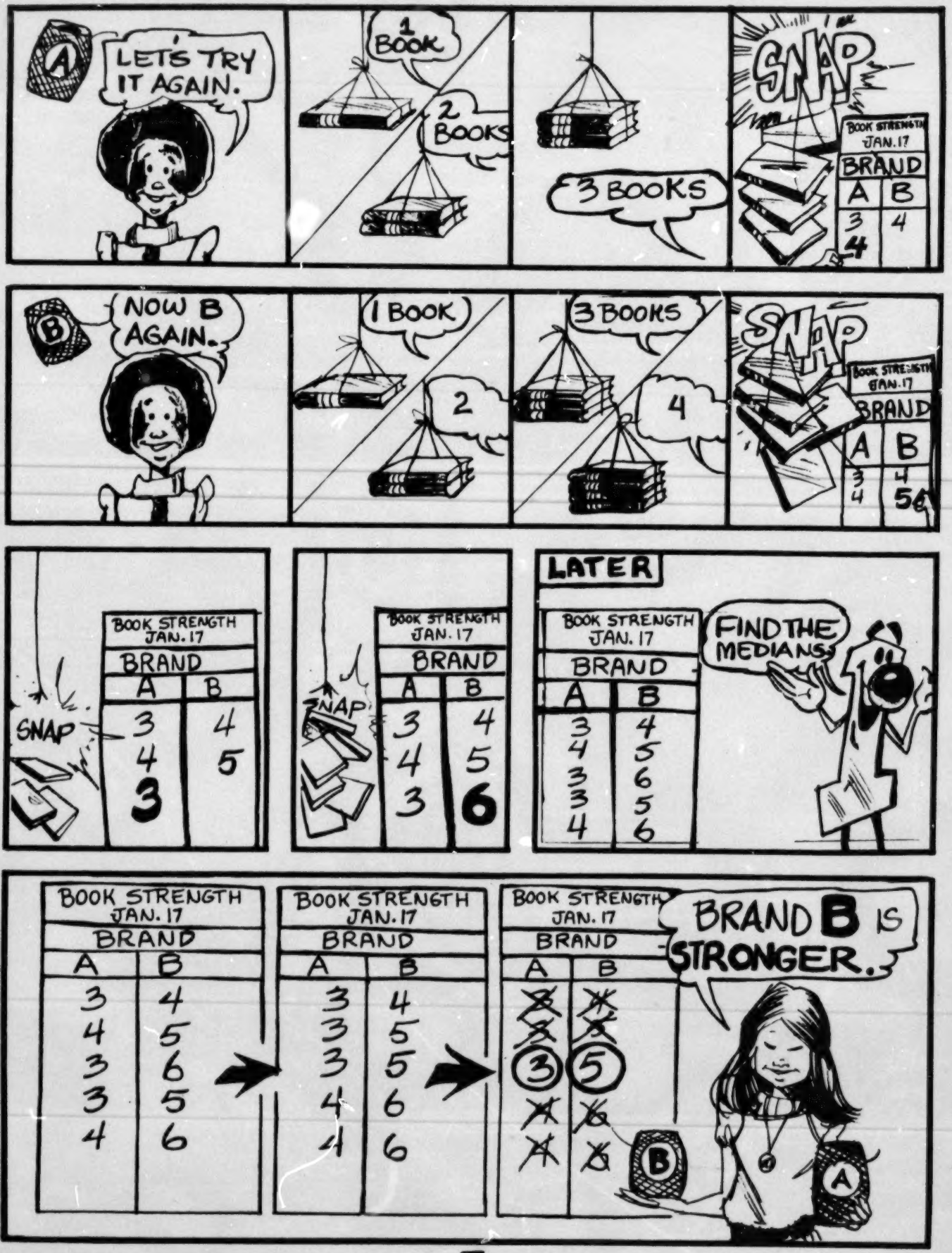
67.5

68

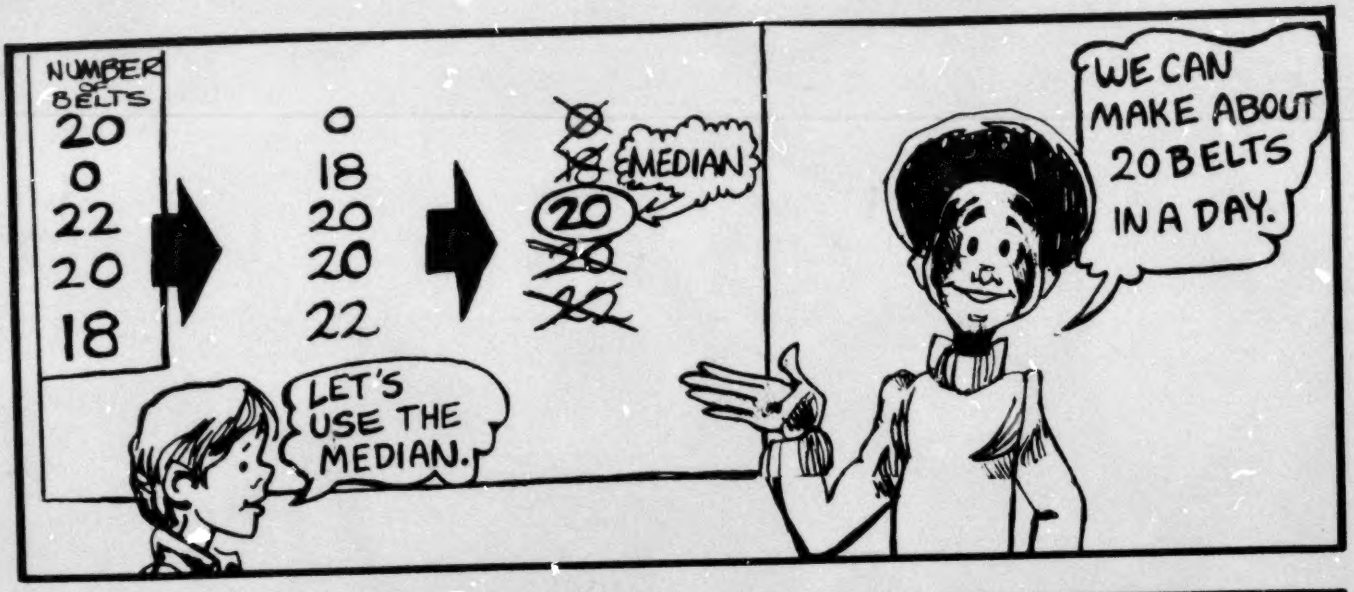
ONE WEEK LATER

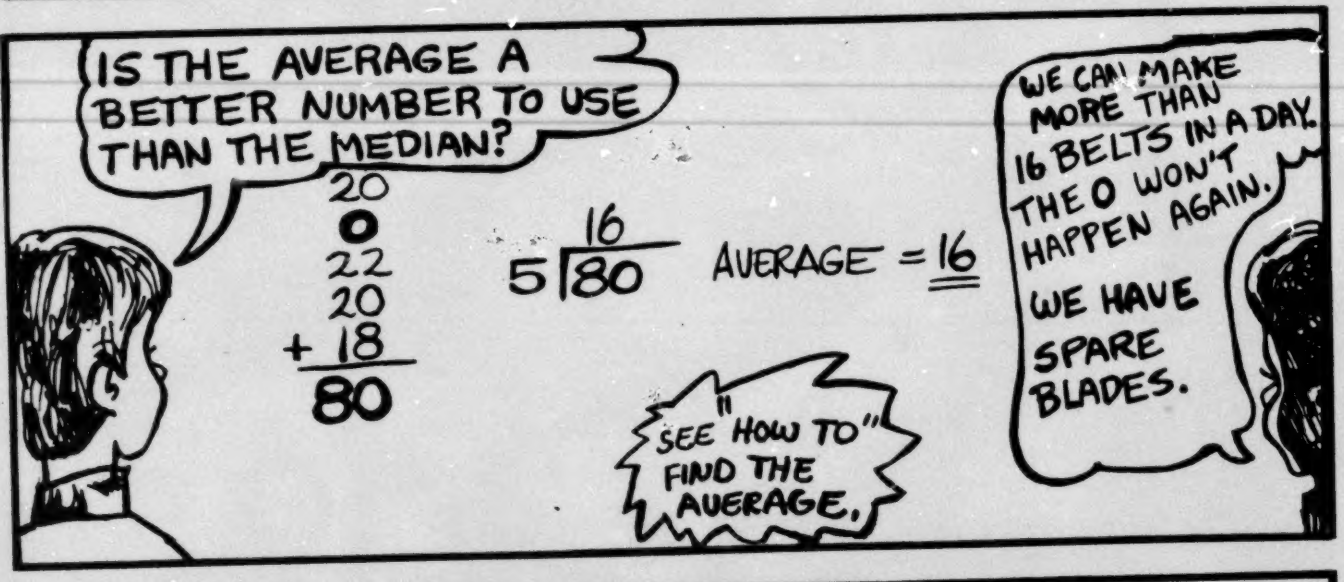
WE MADE OUR TABLE 67.5 cm HIGH.

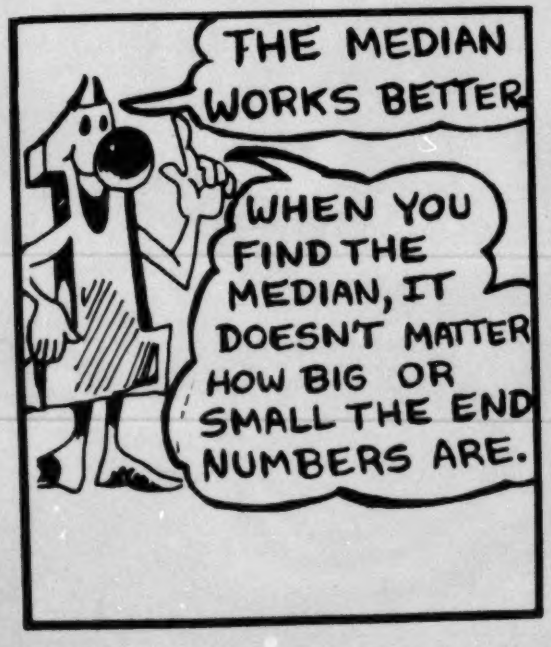

WHICH STRING IS STRONGER? BRAND A OR BRAND B?
A
B
EXAMPLE
WE'LL TEST THEM.
A
B
A
IT HOLDS 1 BOOK.
IT HOLDS 2 BOOKS.
3 BOOKS BREAK IT.
SNAP
BOOK STRENGTH JAN. 17
BRAND
A B
3
B
1 BOOK
2
3
4 BREAK IT.
SNAP
BOOK STRENGTH JAN. 17
BRAND
A B
3 4

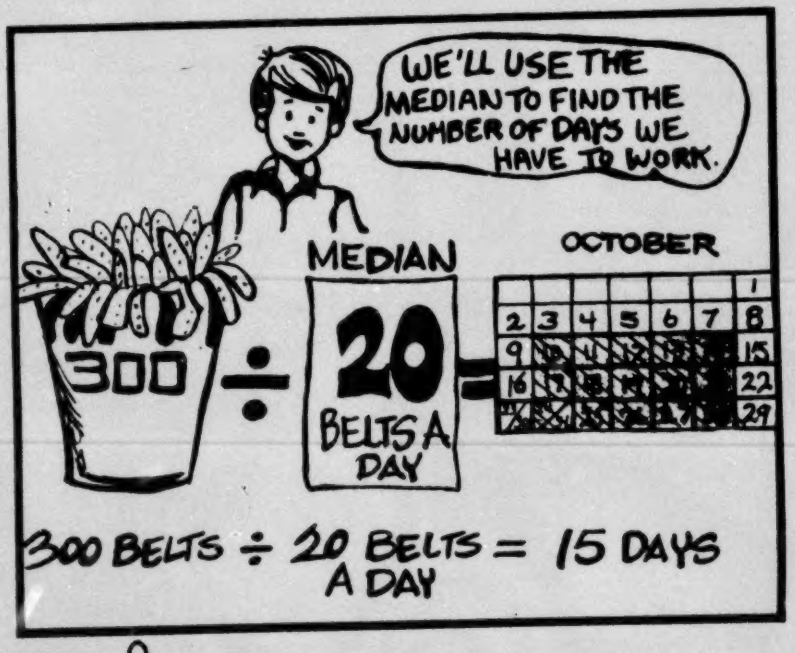

A
LET'S TRY IT AGAIN.
1 BOOK
2 BOOKS
3 BOOKS
SNAP
BOOK STRENGTH JAN. 17
BRAND
A B
3 4
4
B
NOW B AGAIN.
1 BOOK
2
3 BOOKS
4
SNAP
BOOK STRENGTH JAN. 17
BRAND
A B
3 4
4 5
SNAP
BOOK STRENGTH JAN. 17
BRAND
A B
3 4
4 5
3 6
SNAP
BOOK STRENGTH JAN. 17
BRAND
A B
3 4
4 5
3 6
LATER
BOOK STRENGTH JAN. 17
BRAND
A B
3 4
4 5
3 6
3 5
4 6
FIND THE MEDIANS
BOOK STRENGTH JAN. 17
BRAND
A B
3 4
4 5
3 6
3 5
4 6
BOOK STRENGTH JAN. 17
BRAND
A B
3 4
3 5
3 5
4 6
4 6
BOOK STRENGTH JAN. 17
BRAND
A B
3 5
BRAND B IS STRONGER.
B
A

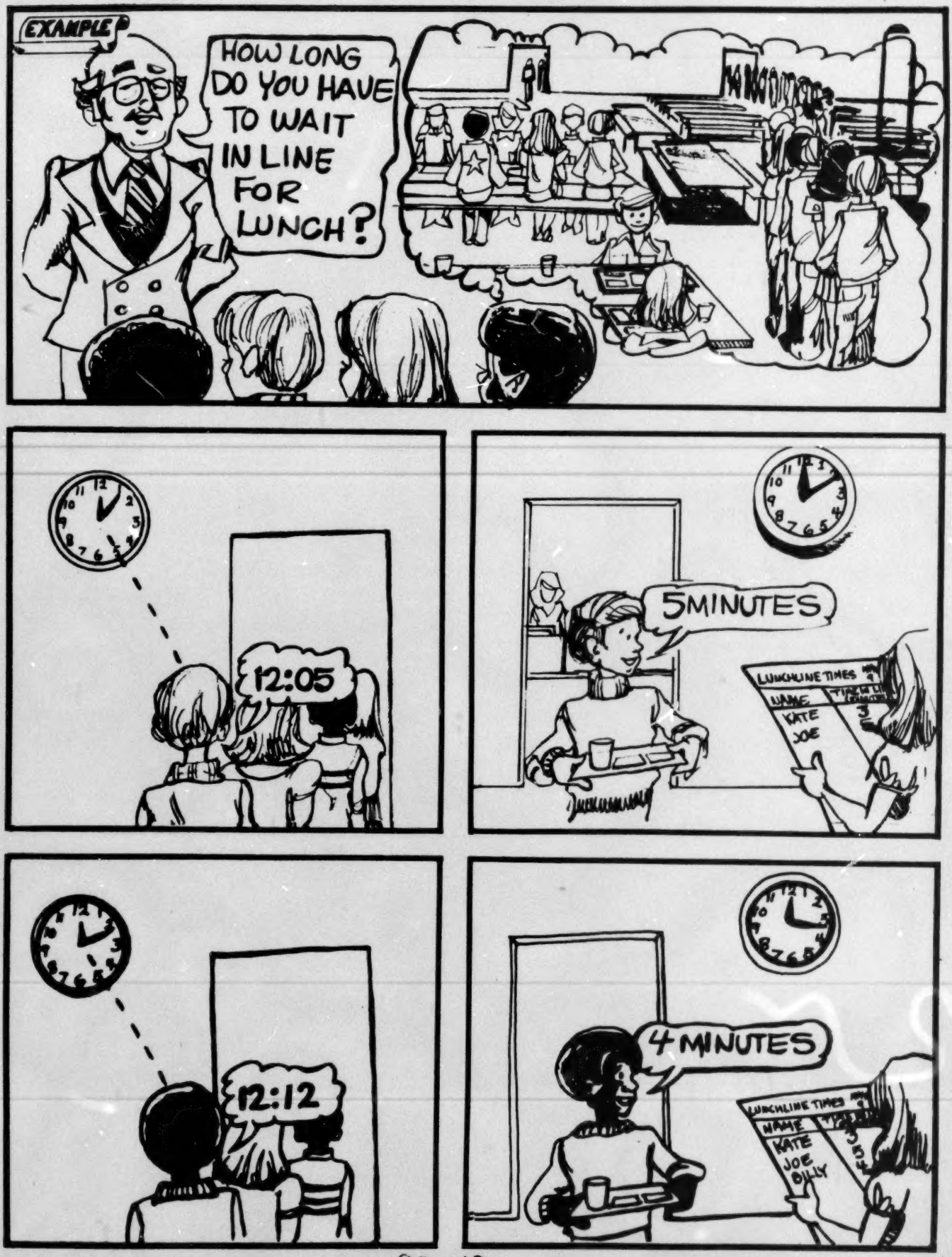
EXAMPLE
WE NEED TO MAKE 300 BELTS.
300
HOW LONG WILL IT TAKE?
LETS FIND OUT HOW MANY BELTS WE CAN MAKE IN ONE DAY.
OCTOBER
MONDAY
MARKING THE PATTERN
CUTTING WITH A UTILITY KNIFE
STAMPING HOLES
ATTACHING BUCKLES
20 BELTS
BELTS MADE
DATE
NUMBER OF BELTS
OCT 3
20
TUESDAY
SNAP
NO BELTS TODAY.
BELTS MADE OCT. 3
DATE
NUMBER OF BELTS
OCT 3
20
OCT 4
0
FRIDAY
18 BELTS
BELTS MADE OCT 3
DATE
NUMBER OF BELTS
OCT. 3
20
OCT. 4
0
OCT. 5
22
OCT. 6
20
OCT. 7
18


NUMBER OF BELTS
20
0
22
20
18
0
18
20
20
22
MEDIAN
20
LET'S USE THE MEDIAN.
WE CAN MAKE ABOUT 20 BELTS IN A DAY.


IS THE AVERAGE A BETTER NUMBER TO USE THAN THE MEDIAN?
20
0
22
20
+ 18
80
5 | 80
16
AVERAGE = 16
SEE "HOW TO" FIND THE AVERAGE.
WE CAN MAKE MORE THAN 16 BELTS IN A DAY. THE 0 WON'T HAPPEN AGAIN.
WE HAVE SPARE BLADES.


THE MEDIAN WORKS BETTER.
WHEN YOU FIND THE MEDIAN, IT DOESN'T MATTER HOW BIG OR SMALL THE END NUMBERS ARE.


WE'LL USE THE MEDIAN TO FIND THE NUMBER OF DAYS WE HAVE TO WORK.
300
÷
MEDIAN
20
BELTS A DAY
=
OCTOBER
300 BELTS ÷ 20 BELTS A DAY = 15 DAYS


EXAMPLE
HOW LONG DO YOU HAVE TO WAIT IN LINE FOR LUNCH?
12:05
5MINUTES
LUNCHLINE TIMES
NAME
KATE
JOE
12:12
4 MINUTES
LUNCHLINE TIMES
NAME
KATE
JOE
BILLY

LET'S FIND THE MEDIAN.

LUNCHLINE TIMES MAY 9

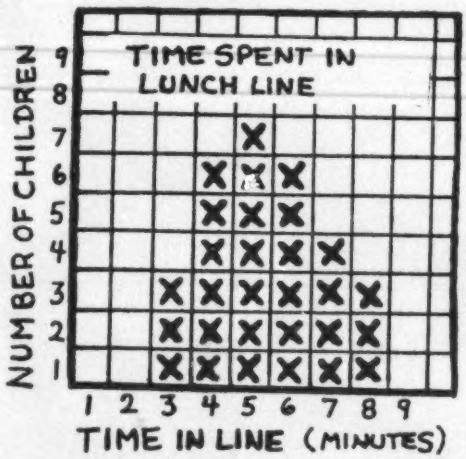
NAME	TIME IN LINE (MINUTES)	NAME	TIME IN LINE (MINUTES)
KATE	3	JESSE	5
JOE	5	JUNE	6
BILLY	4	CARY	7
CARL	3	SANDY	5
MARIA	6	WILL	4
PHIL	5	BOB	7
ALICE	8	ADA	8
DONNA	6	MARTY	6
ABEL	4	DAN	4
ROBIN	5	SELINA	5
JEFF	4	LARRY	7
NANCY	7	PAULA	6
BETTY	6	LYNN	8
CHUCK	4	PATSY	3
		LENA	5

KATE 3
CARL 3
PATSY 3
BILLY 4
ABEL 4
CHUCK

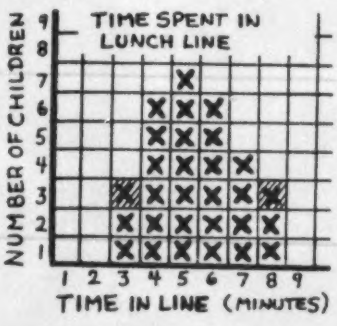
AAAGH! TOO MUCH WORK.

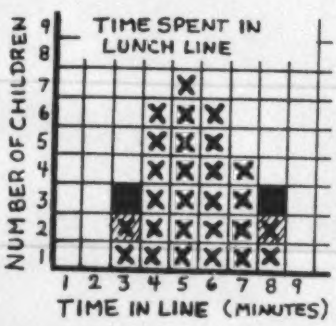
MAKE A HISTOGRAM TO FIND THE MEDIAN.

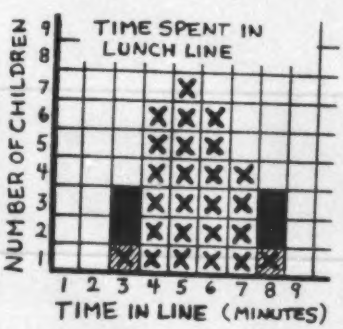
SEE "HOW TO" MAKE A BAR GRAPH HISTOGRAM.

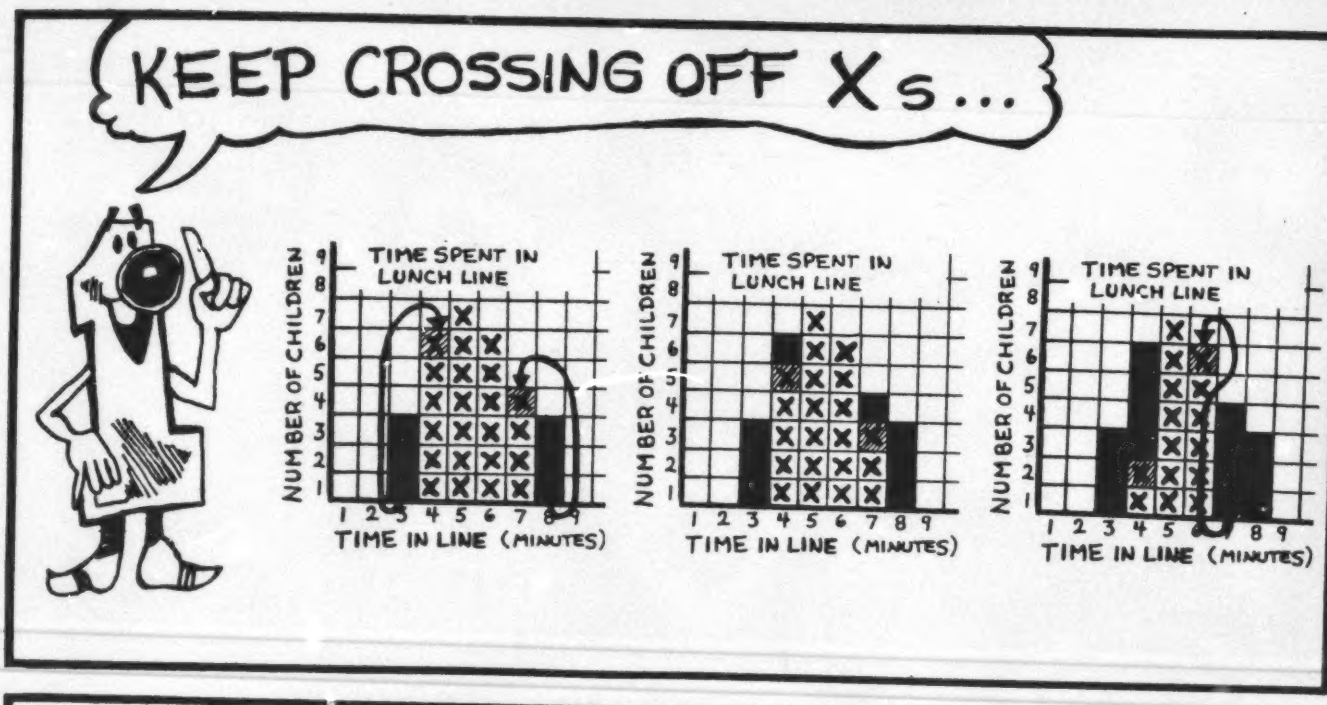


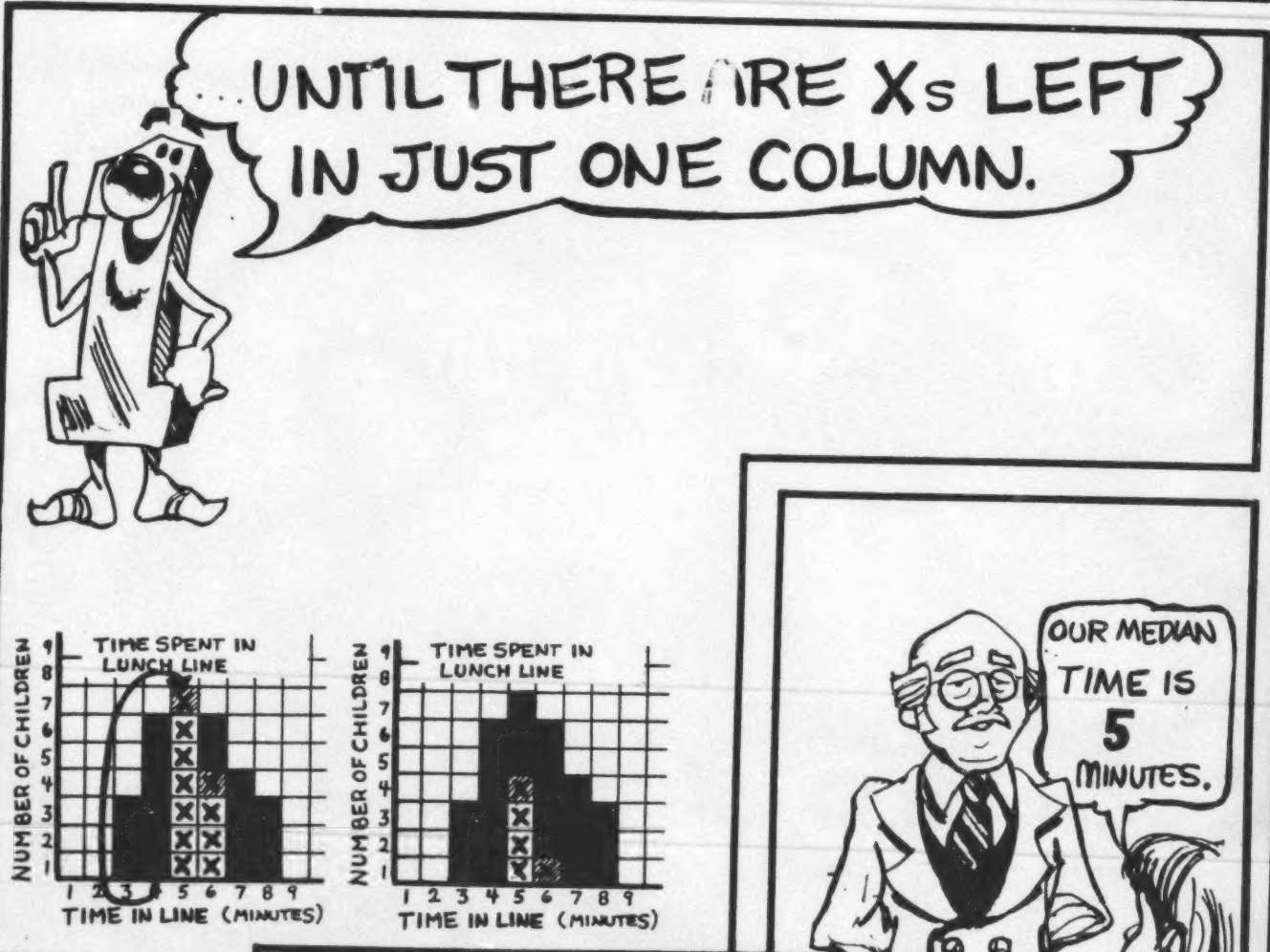
CROSS OFF THE Xs AT EACH END...








KEEP CROSSING OFF Xs...
TIME SPENT IN LUNCH LINE
NUMBER OF CHILDREN
TIME IN LINE (MINUTES)
TIME SPENT IN LUNCH LINE
NUMBER OF CHILDREN
TIME IN LINE (MINUTES)
TIME SPENT IN LUNCH LINE
NUMBER OF CHILDREN
TIME IN LINE (MINUTES)


...UNTIL THERE ARE Xs LEFT IN JUST ONE COLUMN.
TIME SPENT IN LUNCH LINE
NUMBER OF CHILDREN
TIME IN LINE (MINUTES)
TIME SPENT IN LUNCH LINE
NUMBER OF CHILDREN
TIME IN LINE (MINUTES)
OUR MEDIAN TIME IS 5 MINUTES.

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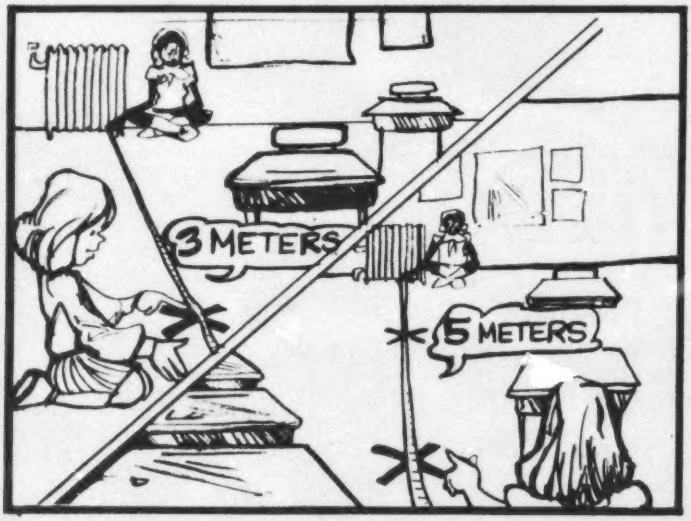
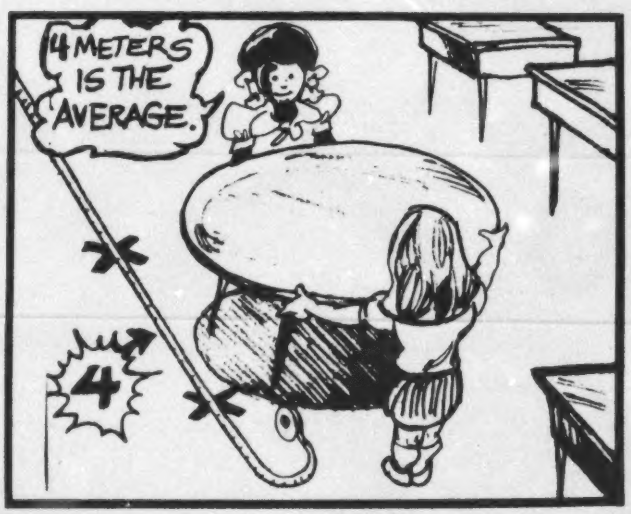
HOW TO
FIND THE AVERAGE

USMES
UNIFIED SCIENCES AND MATHEMATICS FOR ELEMENTARY SCHOOLS





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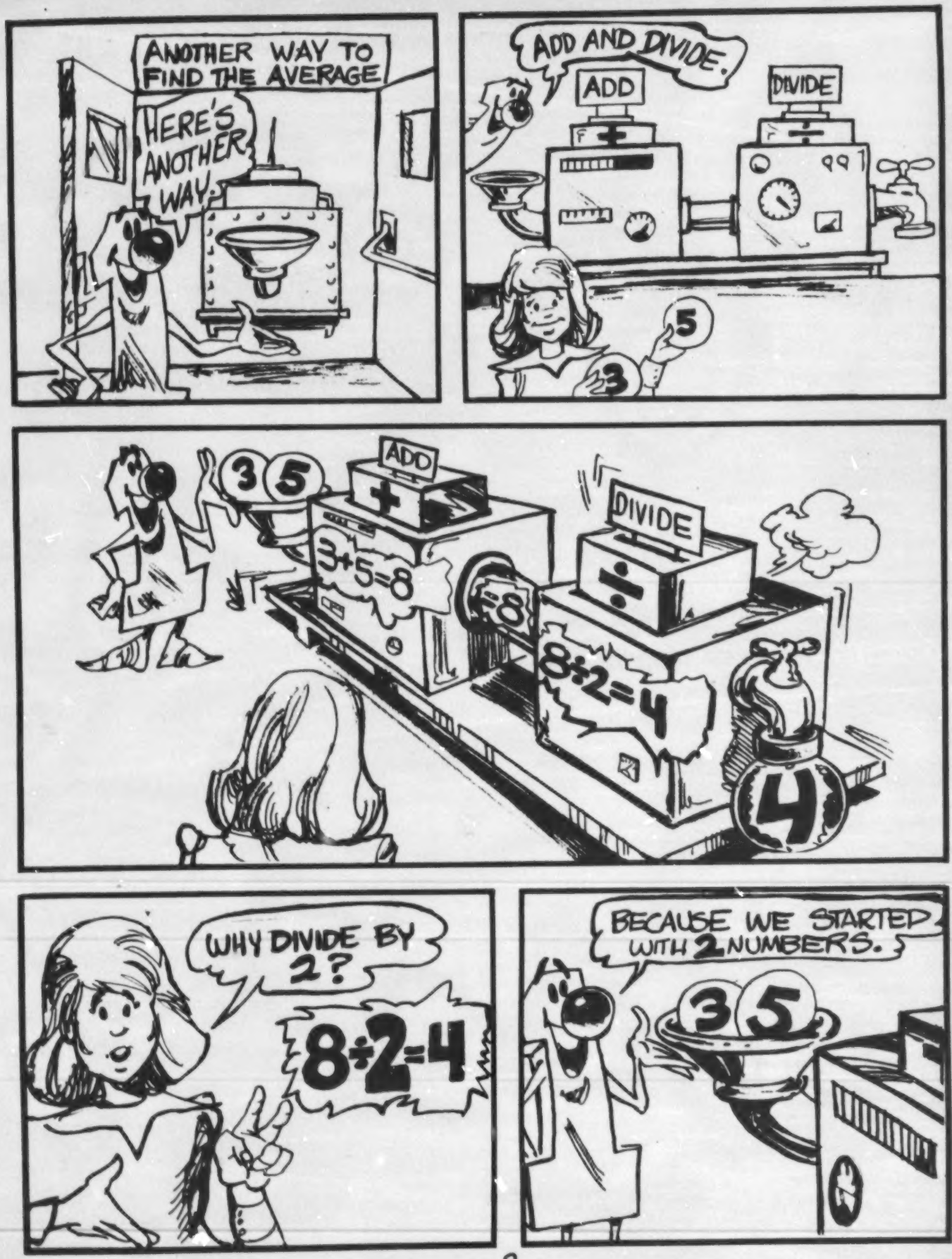
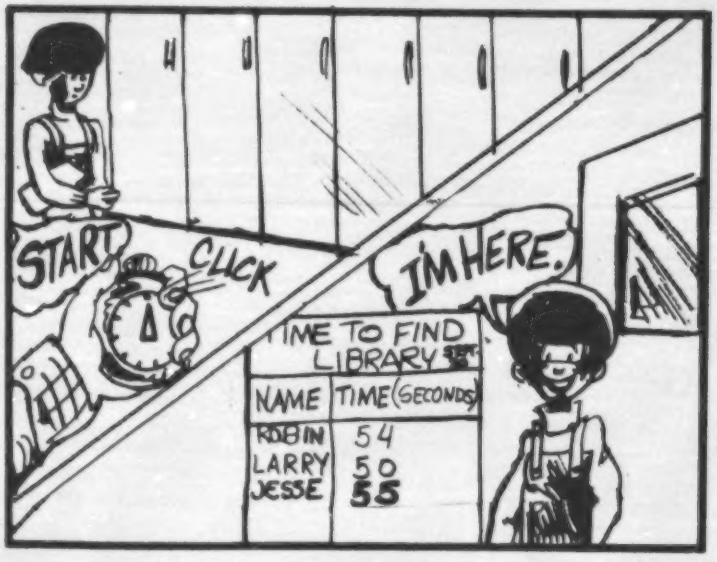

ANOTHER WAY TO FIND THE AVERAGE
HERE'S ANOTHER WAY.
ADD AND DIVIDE.
ADD
DIVIDE
3
5
3
5
ADD
DIVIDE
3+5=8
8÷2=4
4
WHY DIVIDE BY 2?
8÷2=4
BECAUSE WE STARTED WITH 2 NUMBERS.
3
5

TIME TO FIND LIBRARY SEPT. 20

NAME	TIME (SECONDS)
ROBIN	54
LARRY	
JESSE	

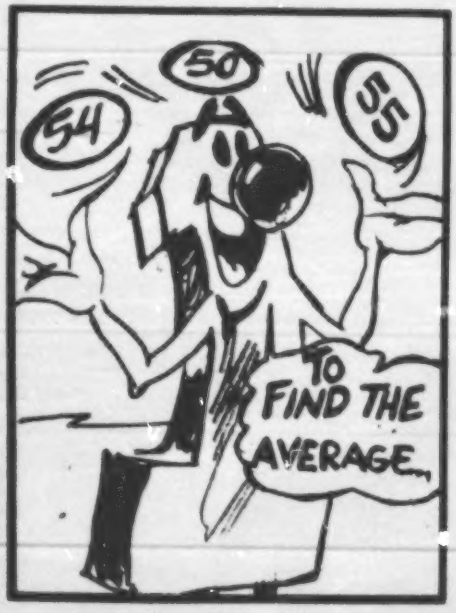
TIME TO FIND LIBRARY

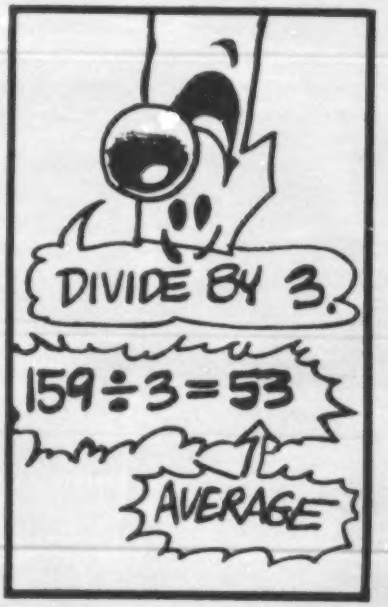
NAME	TIME (SECONDS)
ROBIN	54
LARRY	50

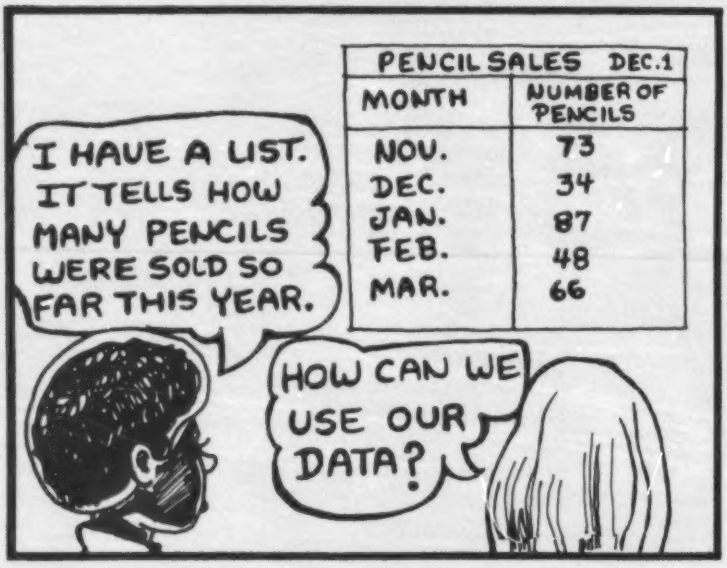


TIME TO FIND LIBRARY

NAME	TIME (SECONDS)
ROBIN	54
LARRY	50
JESSE	55

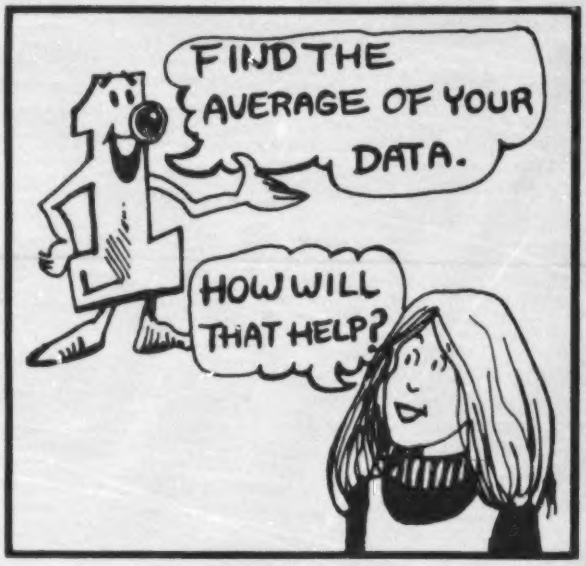


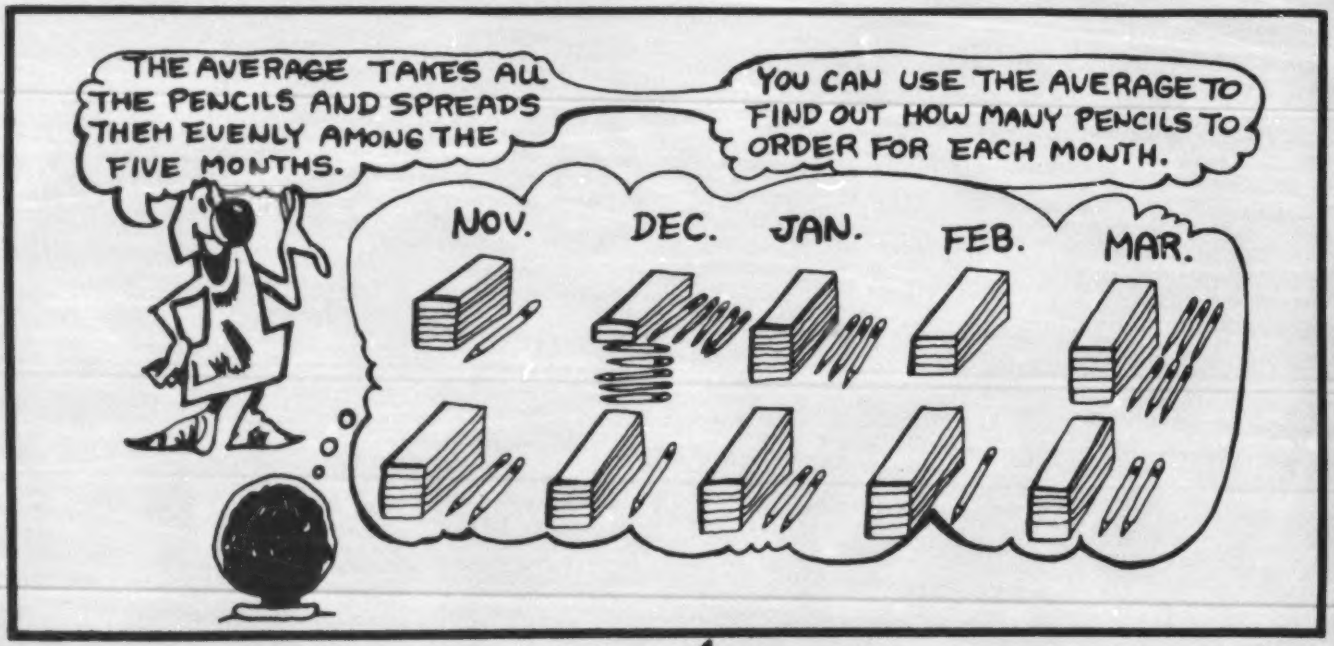


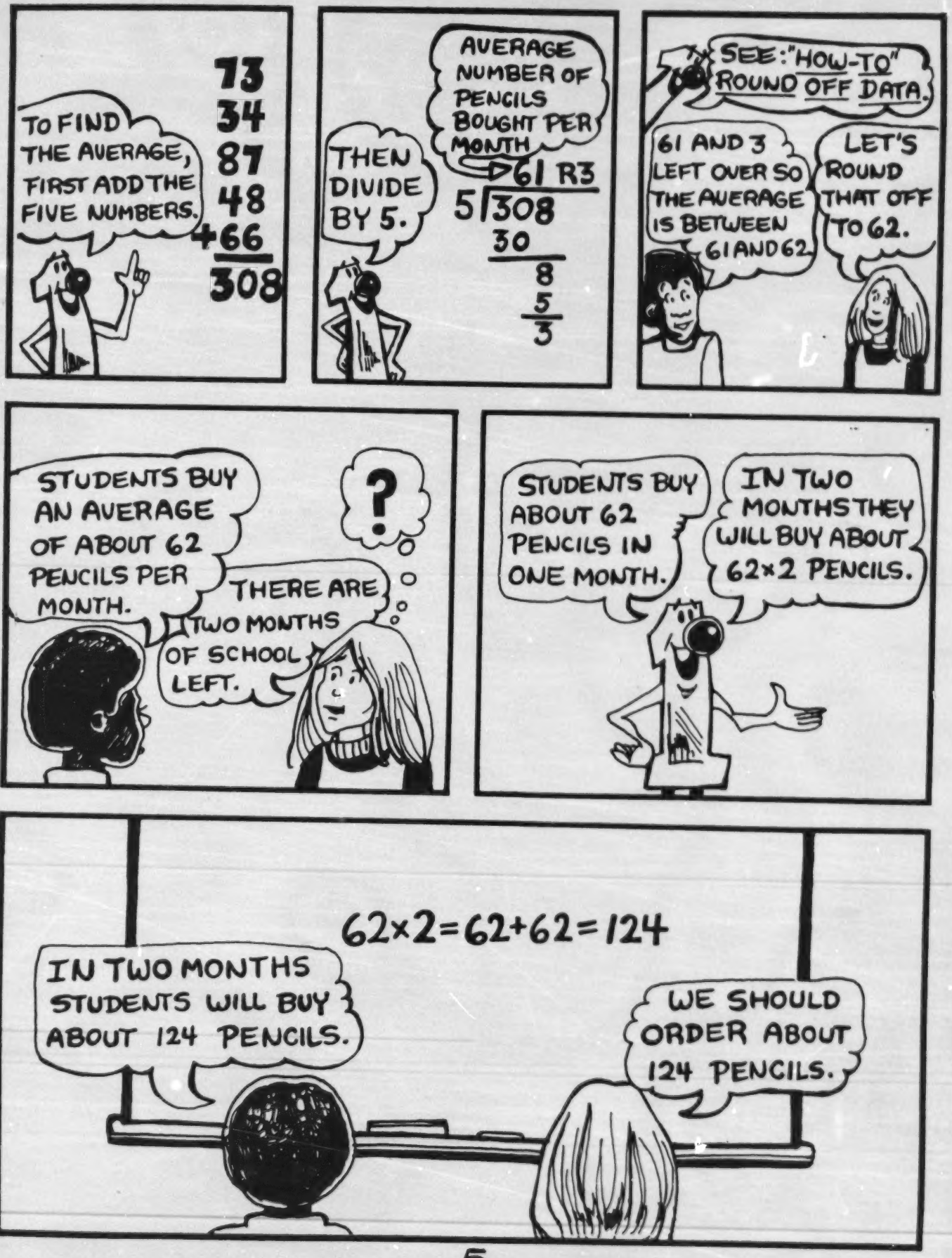


PENCIL SALES DEC.1

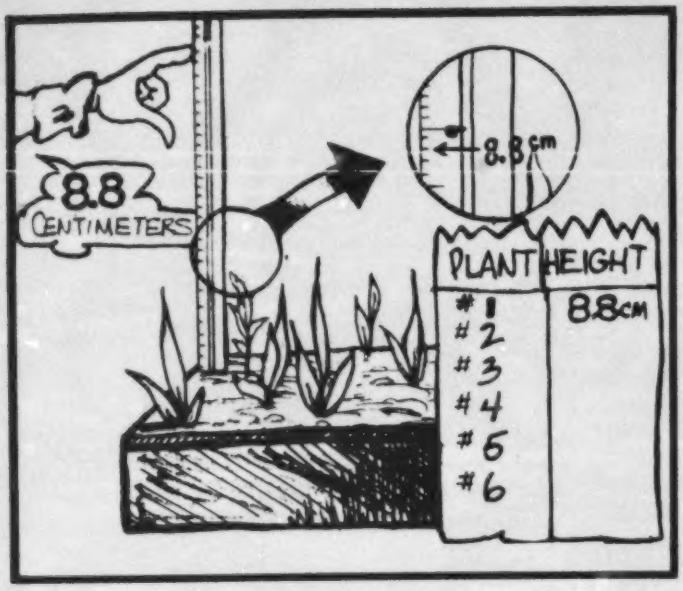
MONTH	NUMBER OF PENCILS
NOV.	73
DEC.	34
JAN.	87
FEB.	48
MAR.	66

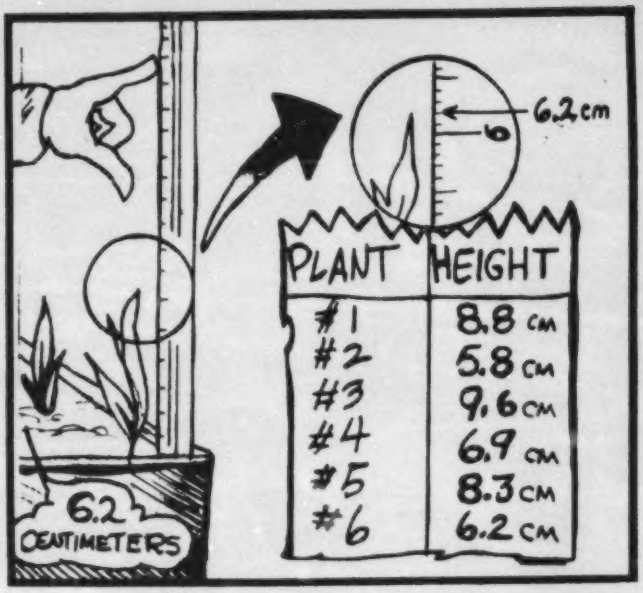


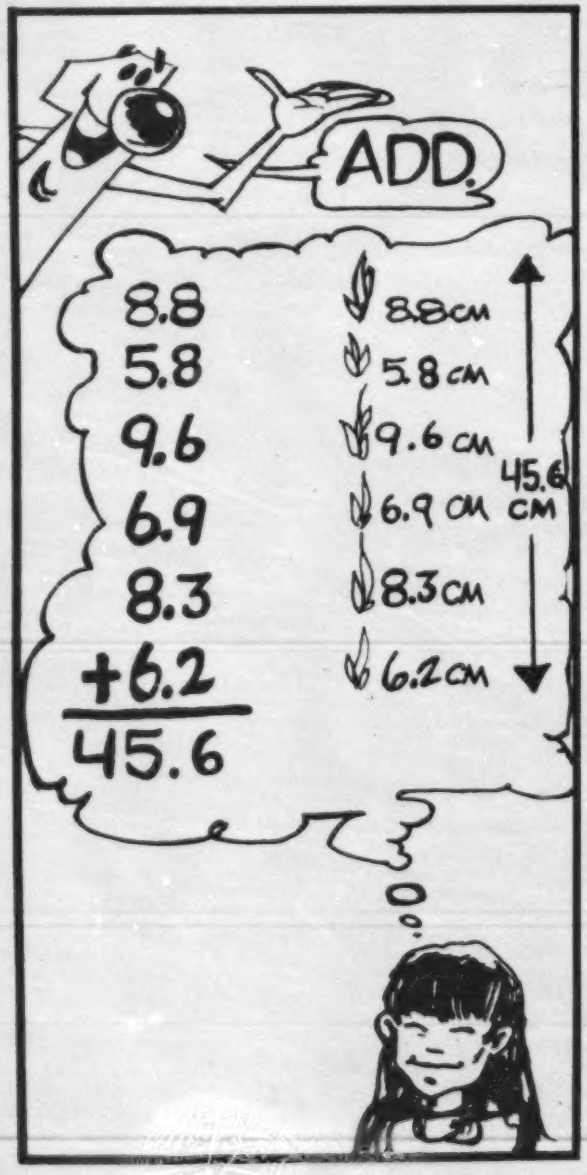

THE AVERAGE TAKES ALL THE PENCILS AND SPREADS THEM EVENLY AMONG THE FIVE MONTHS.
YOU CAN USE THE AVERAGE TO FIND OUT HOW MANY PENCILS TO ORDER FOR EACH MONTH.
NOV.
DEC.
JAN.
FEB.
MAR.

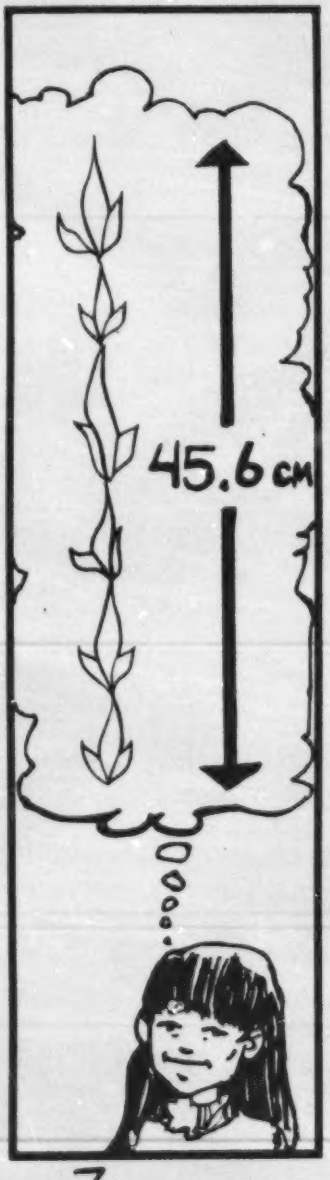

TO FIND THE AVERAGE, FIRST ADD THE FIVE NUMBERS.
73
34
87
48
+66
308
THEN DIVIDE BY 5.
AVERAGE NUMBER OF PENCILS BOUGHT PER MONTH
61 R3
5|308
30
8
5
3
SEE: "HOW-TO" ROUND OFF DATA.
61 AND 3 LEFT OVER SO THE AVERAGE IS BETWEEN 61 AND 62.
LET'S ROUND THAT OFF TO 62.
STUDENTS BUY AN AVERAGE OF ABOUT 62 PENCILS PER MONTH.
?
THERE ARE TWO MONTHS OF SCHOOL LEFT.
STUDENTS BUY ABOUT 62 PENCILS IN ONE MONTH.
IN TWO MONTHS THEY WILL BUY ABOUT 62×2 PENCILS.
62×2=62+62=124
IN TWO MONTHS STUDENTS WILL BUY ABOUT 124 PENCILS.
WE SHOULD ORDER ABOUT 124 PENCILS.

EXAMPLE
WHAT IS THE AVERAGE HEIGHT OF MY PLANTS?
3½ INCHES
MY PLANTS 3/11
PLANT
HEIGHT
#1
#2
#3
#4
#5
#6
3½"
2½ INCHES
MY PLANTS 3/11
PLANT
HEIGHT
#1 3½"
#2 2¼"
#3 3¾"
#4 2¾"
#5 3¼"
#6 2½"
MY PLANTS 3/11
PLANT
HEIGHT
#1 3½"
2¼"
3¾"
#4 2¾"
#5 3¼"
2½"
THESE NUMBERS ARE HARD TO ADD.
? 3½ + 2¼ + 3¾ ?
+2¾ + 3¼ + 2½ = ?
??????
USE THE OTHER SIDE.
MEASURE IN CENTIMETERS.
1.5
1.1 1.2 1.3 1.4 1.6 1.7 1.8 1.9 2.1 2.2
1
2

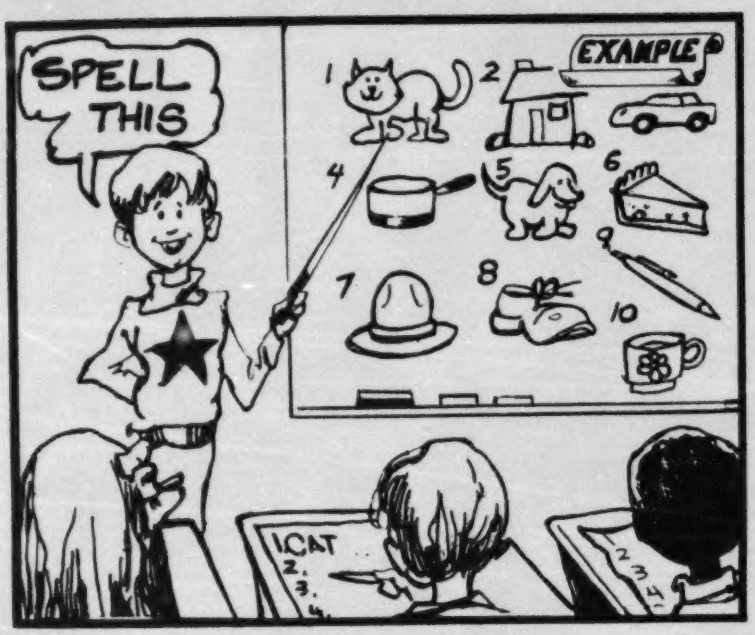

8.8 CENTIMETERS
8.8cm
PLANT
HEIGHT
#1
#2
#3
#4
#5
#6
8.8cm

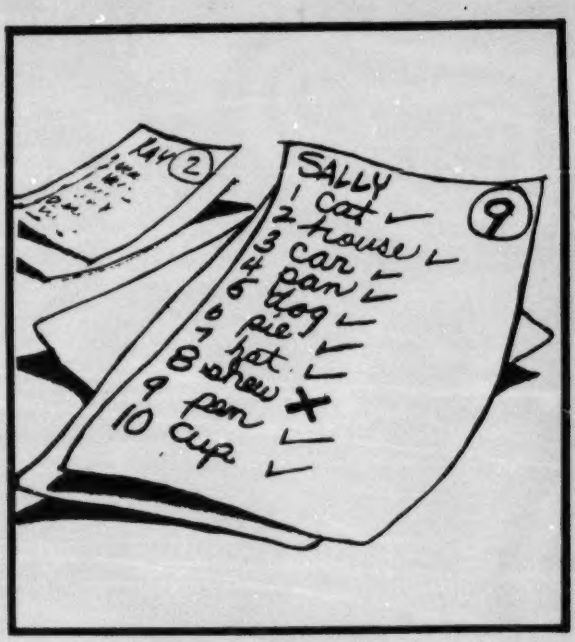

6.2cm
6
PLANT
HEIGHT
#1 8.8 cm
#2 5.8 cm
#3 9.6 cm
#4 6.9 cm
#5 8.3 cm
#6 6.2 cm
6.2 CENTIMETERS


ADD.
8.8
5.8
9.6
6.9
8.3
+6.2
45.6
8.8cm
5.8 cm
9.6 cm
6.9 cm
8.3cm
6.2cm
45.6 cm


45.6 cm

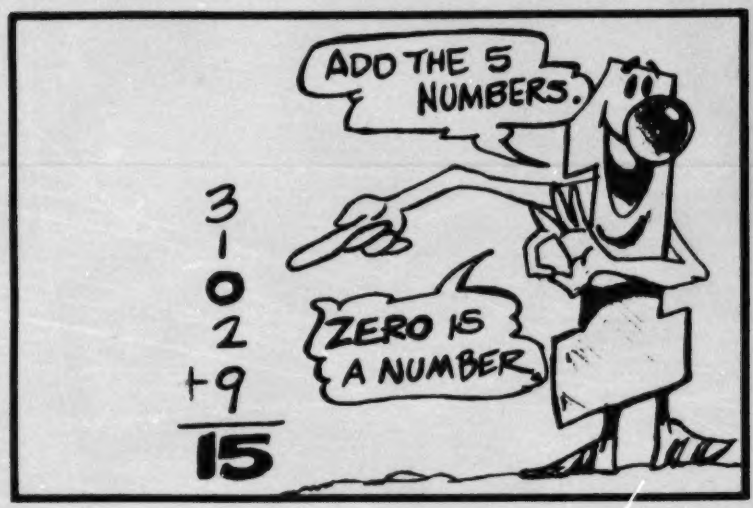
DIVIDE
7.6 cm
7.6
6 45.6
42
3.6
THE AVERAGE HEIGHT IS 7.6 CM.

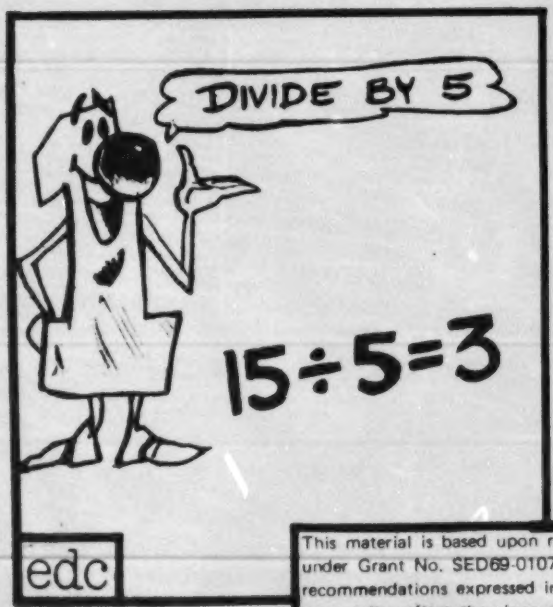




SPELLING SCORES 1/20	
NAME	SCORE
JOHN	3
BETTY	1
ED	0
RAY	2
SALLY	9

WHAT IS THE AVERAGE SCORE?





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